The Builder.

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St. Mary's, Oxford.

THE Church of St. Mary the Virgin, Oxford (for that is the full dedication), occupied an unusual degree of public attention lately in consequence of the anti-restoration quarrel which was got up in sundry newspapers about the renewal of the pinnacles and of some of the statues, which were in a condition dangerous to public safety; a quarrel in which the archæological party exhibited even more than their usual intolerance and indifference to facts, and in which one at least of the journals which took up the subject endeavoured to cook a case against the restoring architect by printing misstatements as to what he was going to do, and refusing to print his replies—one of the characteristic methods of "the new journalism." But even apart from this extra publicity, there are few churches in England the main features of which are more widely known to cultivated Englishmen, the spire forming as it does the most prominent object in that world-famous street flanked by

"The sacred nurseries of blooming youth,"

while it is also a prominent object in the memories of thousands of foreign visitors to whom Oxford has been a shrine of pilgrimage. And though there is nothing very architecturally remarkable about the body of the church itself, a fairly good piece of late Gothic, there is a striking and marked individuality about the design of the tower and spire, which alone is prominently seen in the view of High-street, as if its architect had foreseen the amount of attention its position would attract, and had determined to stamp it with a character of its own. In this he fully succeeded; no other tower and spire in England is like it; the eye is at once struck by it as something powerful and unusual among such erections. This marked character arises mainly from the manner in which the angle buttresses are carried with a bold projection right up to the parapet, where they are still 4 ft. in projection (the greatest projection in the lower stage, just above the plinth, being over 7 ft.); the great size and richness, and unusual design, of the angle pinnacles; and the effective contrast between the plain treatment of the tower and spire and this concentrated richness of decorative effect in the centre. The design of the base of the spire, in fact, is quite out of the ordinary lines of mediæval architecture, and impresses itself on us as a stroke of real architectural genius.

This is a kind of special interest which is obvious to the eye, yet the historic interest of St. Mary's, which cannot be appreciated without a study of its records, is even greater and more remarkable than the architectural interest of its tower, and for this reason it is well that the monograph on it which has just been issued,* has been undertaken by an architect who is something more than a mere architect, and who can adequately appreciate and describe the important part which the church played in the history and life of Oxford University. This is not indeed the portion of the book with which we are most immediately concerned, but it is impossible to pass it over entirely, or to omit expressing our recognition of the interesting and effective manner in which Mr. Jackson has condensed into a comparatively limited space the main facts as to the part played by St. Mary's Church in the ancient university life and policy of Oxford, as well as its occasional connexion with events of wider significance.

Mr. Jackson commences his historical sketch by asking us to picture a University "with no architectural magnificence, and perhaps with no buildings of any kind at all that could be called absolutely its own." We are so accustomed to conceive of a University, from our own associations with Oxford and Cambridge, as involving a collection of rich and stately buildings, that it is almost a shock to our feelings to be reminded that only a very small proportion of these buildings which make the architectural glory of the two University cities are essential to a University, or are in fact any portion of the University properly so called. They are collective residences for students of the University, that is all.

"At Cambridge the buildings belonging to the University are even now somewhat inconspicuous. At Oxford, till within the last fifty years, they consisted of little more than the schools, with Bodley's Library over them, the Sheldonian Theatre, and the Clarendon Building. At the time of the Reformation, the Divinity School, with Duke Humphrey's Library over it, was the only building of any consequence attached to the University, for Abbot Hokenorton's schools then standing were mean and insignificant. In the fourteenth century the old Congregation House, with the room over it, was the only structure the University could call its own. Before that time it had no buildings; and its public acts were performed, and its deliberations conducted, by the leave of the parishioners, within the walls of a church."

That church was St. Mary the Virgin, Oxford, whose history, as Mr. Jackson says, during the middle ages was the history of the University. The Parliament of the University met there; the clerks were by its bell summoned to arms whenever the bell at St. Martin's at Carfax summoned the citizens for a fray, the venerable and pretty serious origin of the "town and gown" riots which were only within recent memory put down; the formation of the University library began there, with the books chained to its desks; the worldly possessions of the mediæval University were kept in the church as the place of greatest security. "During the middle ages, besides being the official church of the University, St. Mary's was also its Senate House, its Divinity School, its Library, its Court-house, and its Treasury. And though the secular and educational functions to which it once ministered are now provided for elsewhere, St. Mary's is still, as the church of the University, the scene of the one outward and ceremonial expression of her religious life." And the University recognised the responsibilities incident to this use of the parish church. When the nave and aisles fell into ruins, in the fifteenth century, it was at the cost of the University that they were rebuilt, as at the cost of the University also the tower and spire have more than once been repaired (the recent repair included).

"The nave and aisles have been at least twice since the Reformation refitted with seats in a manner more adapted for the purpose of University sermons than for the ordinary parochial services. In the stately procession of Vice-Chancellor and Proctors, with bedells and maces, and Doctors in scarlet and black velvet, which streams up the nave of St. Mary's on Sundays and festivals, and in the throngs of black-robed scholars that fill the floor and brood like a dark cloud in the galleries, we see the sole survival of the many uses which the

* The Church of St. Mary the Virgin, Oxford. By T. G. Jackson, R.A., Architect. With many illustrations. Oxford: At the Clarendon Press. 1897.

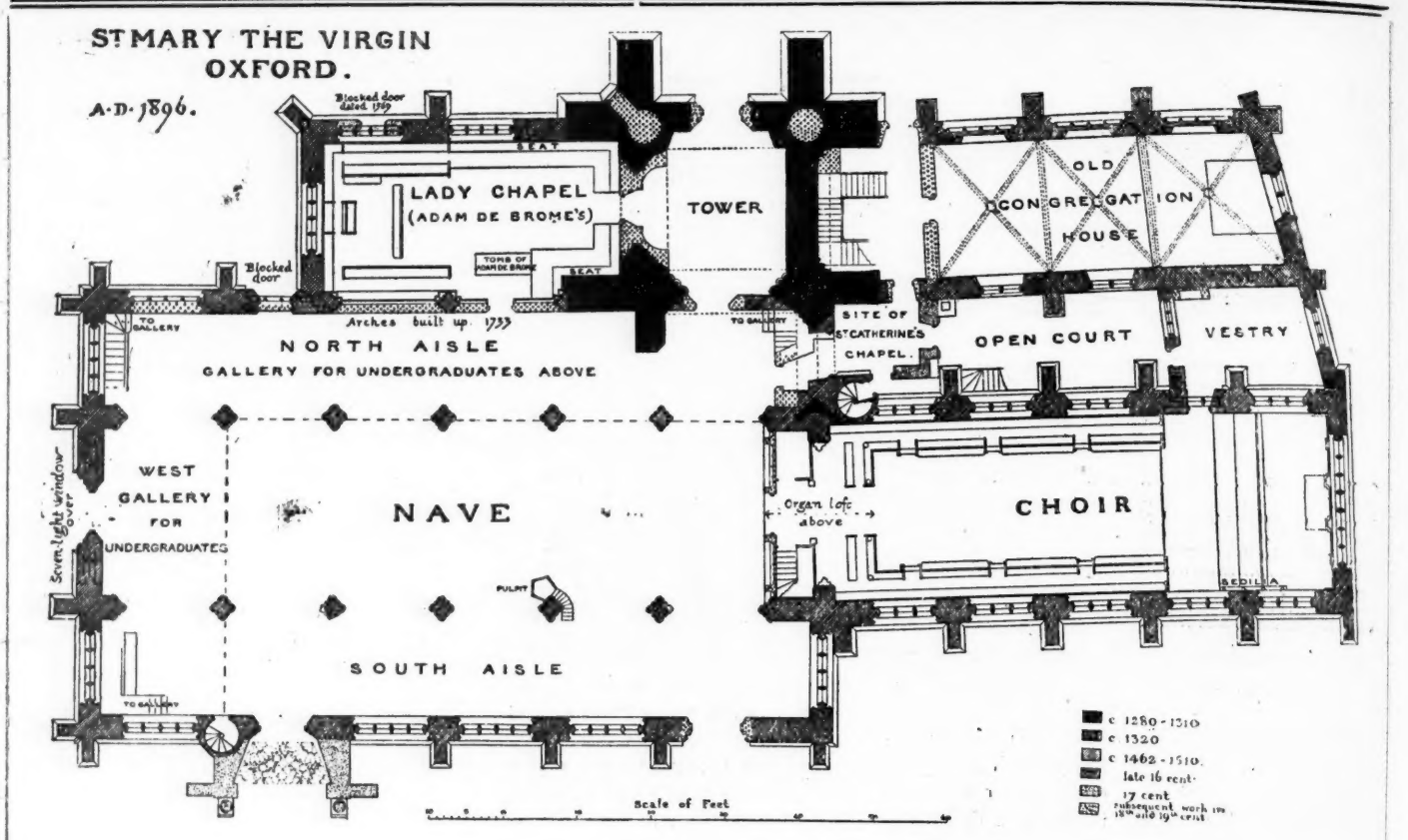


Fig. 1.

University once made of the building; the sole historical rite which speaks to us of the days when the Chancellor and scholars in their corporate character knew no other home than that afforded by the walls of the church of St. Mary the Virgin."

For the details of this history of the church, as the ancient centre of the official life of the University, we must refer the reader to Mr. Jackson's book. We will just notice also here the eloquent and pathetic account which he gives of certain other incidents of which St. Mary's was the centre, the interest of which is still wider and deeper than that of any University history—those, namely, connected with the trial of the martyrs who within these walls showed the world how high principle could triumph over the fear of death even in its most painful form; and we cannot but express our sympathy with the author's comment on "the cheap contempt that has been poured on Cranmer in the present day, for a coward and a timeserver, by those who are never likely to be tried by fire." How the very fabric of the church still bears the probable marks, as it were, of Cranmer's trial, is pointed out in two or three instances, especially in the tradition that the finials of the stalls in the choir were mutilated, by cutting off their tops to facilitate the construction of the stage on which the judicial body of clergy were to sit. "What vandalism!" would have been the cry had there been any "antiscrape society" in those days. But there are occasions of spiritual conflict in the face of which even the most cunningly carved finials do not go for much.

However, we must devote a few words to the more strictly architectural side of the subject. In fig. 1 is shown the plan of St. Mary's as it now exists,* with the different dates distinguished by different shading, the renowned tower being the oldest portion of the building. Of these the most interesting and curious portion, in a historical sense, is no doubt the oddly shaped adjunct of the old Congregation House, abutting against the east side of the tower, and which was the first building the University could actually call its own. Mr. Jackson observes that the age of this building has been exaggerated (apparently from the mis-reading of supposed documentary evidence), and that the internal evidence of the architecture is conclusive as to its being of the fourteenth century, and a good deal later than the lower portion of the tower. The building is in two stories, and there is a good deal of interesting history as to the original object of the upper story, and the debate about the rights of the University over it and its contents, for which we must refer the reader to Mr. Jackson's pages. It may suffice to say here that the upper story or "solar" was for a considerable period the University Library. The building is at present in a deserted and dilapidated state, and the lower story has been for the present utilised as a storehouse or museum for those remains of the mediæval sculpture from the tower which it was not thought safe to reinstate in their original positions. A sketch is given of its present aspect, with the old statues arranged against the walls. It had been previously, down to as late as 1871, used as the University fire-engine house. It is rather odd that the author gives no explanation of the skew shape of the end of the building, either in the text or on the plan. A peculiar feature in it is that on the outer side, furthest from the choir, its two-storied character was altered in the fifteenth century by the formation of large traceried windows similar to those of the aisle of the church, the lower portion of which cut into the lower chamber and the rest into the upper chamber, the floor crossing them; thus anticipating Lord Grimthorpe's arrangement of the south transept window at St. Albans.

The elevation of St. Mary's as it now exists shows the spire turrets as rebuilt, by Mr. Jackson. Loggans' print of 1675 is reproduced as an illustration to the book, in which the general outline and proportion of the pinnacles differ a good deal from that seen at present, the middle portion being lower and less massive, and the crowning pinnacle higher and thinner in proportion. This, however, was a Jacobean restoration, and affords no positive evidence as to the original termination. The record of this is now lost, but the probability, to our thinking, is that the outline of the Jacobean restoration came pretty near to that of the mediæval pinnacles, that in fact it was a restoration of them with Jacobean detail; for it is quite possible that the Jacobean architect might have had some record of the mediæval design, although it is lost to us. Mr. Buckler, in his restoration of 1850, assumed the right to neglect the Jacobean restoration and put up a design of his own, for the retention of which a huge clamour was set up by many persons, simply because it was the outline which they in their lifetime had been accustomed to. Buckler's pinnacles might have gone down to posterity as the final form, had he been more careful in the selection of the stone; as it is, they have come in forty years to be in a dangerous state, and the objecting faction seemed to forget that they had no historical value whatever, and that Mr. Jackson was not in the slightest degree bound to adopt Buckler's reading of the problem. Mr. Jackson's restoration of the upper portion, we learned from his report (which is reprinted in this book), was decided on after models had been put up of two designs of his own and one by Mr. Case, Professor of Moral Philosophy (what doth Moral Philosophy with finials?), and the one eventually selected was not the one he himself preferred, though it was not the "moral philosophy" one. There cannot be the slightest question, however, that it is better in effect than either the

* The plan and elevation are reduced, by permission of the publishers, from the larger drawings in the book.

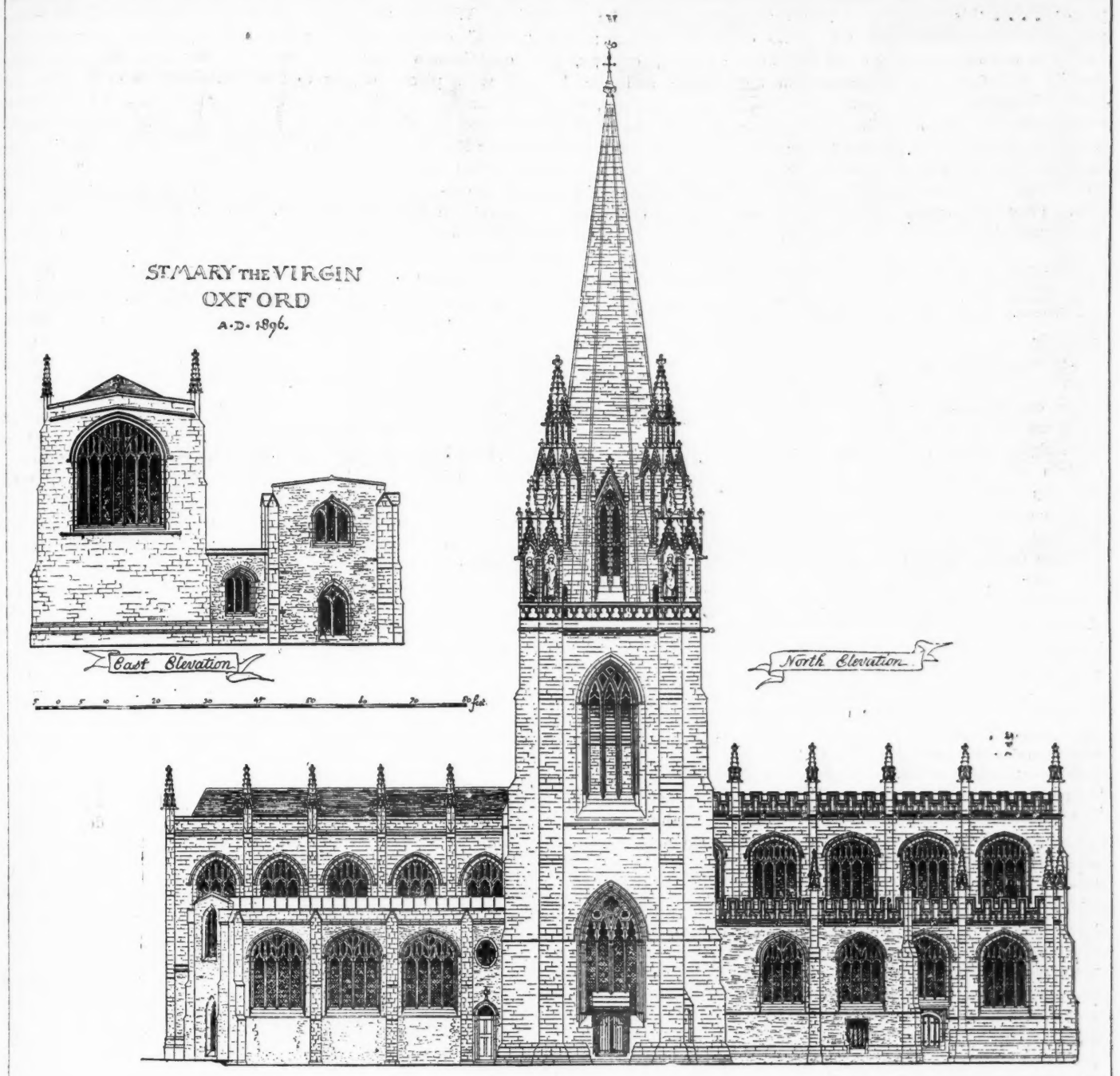


Fig. 2.

Jacobean restoration or Buckler's design, and perhaps better in line than even the mediæval termination, if we are right in our belief that the Jacobean restoration probably is the nearest testimony we have as to the lines of the mediæval design. As this latest design has been carried out in a stone very carefully selected for its enduring quality, it will remain for an indefinite period as the permanent and final form of St. Mary's Spire, and we are inclined to think the best outline it has ever displayed; and as what was taken down had no historic value, we do not see what pretext any lover of St. Mary's has for complaint.

A very full account is given, with illustrations from photographs, of the remarkable series of sculptured figures on the tower, concerning which again a storm was raised on account of their removal from their position; but Mr. Jackson conclusively showed (at least to all but mere bigots) that they were in such a state that if replaced *in situ* there would be danger of detached portions from them falling, without warning, on the heads of passers-by; and at the best they could have lasted, even in that dangerous condition, but little longer. What should be put in their place was no doubt a question of some difficulty. Mr. Jackson and Mr. Frampton, the sculptor, were of opinion that he (Mr. Frampton) should produce the best modern sculptures of the same subjects that he could, only assimilating their lines, in a decorative sense, to those of the architecture. The authorities decided that he should make accurate copies of the old statues. There is a good deal to be urged in favour of both courses, but on the whole we are inclined to the view of the architect and sculptor, that the ancient work should not have been copied. Sculpture is quite a different thing from such architectural detail as mouldings and arcades.

We have merely touched slightly on the interesting information to be found in the book, which is a worthy commemoration of a celebrated Oxford building by one of the University's own children. A word of appreciation should be added in regard to the illustrations, which, except the reproductions of old prints, are all by the author's own hand. Mr. Jackson is not one of the writers of architectural books who have to depend upon other persons to make their illustrations.

NOTES.

The Unemployed and the Eight Hours' Day.

THE fallacy of one of the most cherished arguments of the supporters of the eight hours' movement has just been fully demonstrated—by the Trades-Union Congress! It is contended by the former, with all seriousness, that the men would be so benefited physically by receiving the same wages for eight hours' labour as are at present paid for nine, that they would be able to accomplish the same amount of work in the shorter time. The Trades-Union Congress, on the other hand, foresee that less work would be done, and an opening thus made for some of their unemployed members; and at Tuesday's meeting a resolution was carried by about 7 to 1, in which this anticipation was expressed in the following forcible words: "Seeing that the eight hours' working day is one of the most important preliminary steps towards the ultimate emancipation of the working

class, and will lessen the number of unemployed, ... this Congress declares that the time has arrived when the hours of labour should be limited to eight hours per day in all trades and occupations in the United Kingdom." The question is, are the employers in a position to absorb the unemployed in the manner suggested? The reply is to be found in their attitude of resistance to the engineers' demand for the eight hours' day. They really cannot afford to solve the great unemployed question in this way.

The Architectural Rooms of the Brussels Exhibition.

THE architectural rooms in the Art section of the Brussels International Exhibition are certainly not a success, though arranged under the auspices of the Société Centrale d'Architecture de Belgique, aud intended to figure conspicuously in connexion with the Congress of Architects which was held at the Belgian capital last week. The rooms contain chiefly academical drawings by students or beginners, and there are only a few exceptions in the form of work executed by local architects, with perhaps a dozen exhibits (mostly in the form of photographs) by Austrians, Dutchmen, Frenchmen, and Germans. To call the collection a Belgian Architectural Exhibition, let alone an "International" Exhibition, as some well-wishers appear to have designated it, would be a farce. The drawings certainly did not merit the attention accorded them by the Belgian Minister of Public Works, who "opened" the rooms on the first day of the Congress, and the Société Centrale would have done well to have avoided being associated with so lamentable a show. Berlin, Buda-Pesth, Paris, Turin, and Vienna have in turn arranged very interesting architectural rooms in connexion with their various exhibitions. There was no reason why Brussels should not have done the same, for Belgium has been making rapid strides in architecture, and can boast of many public buildings of considerable pretensions only recently completed. The only design for a Belgian Government block of some importance shown in the architectural rooms was that for a new military college, by Herr Van Massenhovn. A design for a cathedral in the Italian Renaissance style, by Herr Willaert, called for comment among the various "projects," and a design for an Academy of Arts by Herr Defever (Antwerp) might also be mentioned. M. Cordonnier sent his design for the Exchange Buildings for Amsterdam, and a model of his town hall at Dunkirk; Professor Wagner, of Vienna, was represented by some sketches and "ideals" of very excellent draughtsmanship; and the Dutch architects, such as MM. Cuypers, L. Cuypers, Verheul, and Meyers, contributed photographs of a number of buildings, and exhibited them in the hall which was taken up by Holland. In the central room of the Art section a model of the Château Bouillon occupied a prominent position. There were some interesting exhibits of craftsmanship, and some fine publications by Messrs. Lyon-Claeson in connexion with the architectural group; but, taken as a whole, the Brussels Exhibition would have been better without its architectural rooms.

The "Ruins," Virginia Water.

IT is stated that the columns of these artificial "ruins" having become unsafe have been dismantled. They were erected at the south-western corner of the lake for George IV. by Sir Jeffry Wyatville, after the fashion he adopted at Woburn and Kew Gardens; the "ruins" consist of columns, capitals, and entablatures from Greece and the Levant, with pieces of statuary, altars, memorial stones, &c. Virginia Water, originally a part of the Forest, was laid out and planted by Paul Sandby, and added to Windsor Great Park, for William Duke of Cumberland when Ranger, who also erected the Belvidere Fort on Shrubb's Hill. The building on Chinese Island, and the Fishing Temple, were added respectively in the reigns of George III. and his successor. There is a plan by W. A. Delamotte, which shows the "ruins" as crossed by the road to Windsor.

Excavations near the Ilissus.

IN the course of excavations near the Ilissus at Athens, the Ephor of Antiquities, Mr. A. Skias, has re-discovered a temple known to Stuart and Revett, but the site of which had been since lost. The temple lies about one hundred paces from the spring known as Kallirrhoë, on the rocks south of the river. In Stuart's time there were substantial remains extant, but now foundations only have come to light, and these in such a fragmentary condition that, but for the drawings made last century, there might have been some doubt as to whether they had actually belonged to a temple. The pronaos of the temple, which originally had four outer and inner two columns, was at one time converted into the apse of a Christian church. There seems no reasonable doubt that Mr. Skias has re-discovered the site of the Temple of Artemis Agrotera, mentioned by Pausanias (I. xix. 7) and seen by him after he crossed the Ilissus and before he went to visit the Stadium.

The Blue Coat School, Westminster.

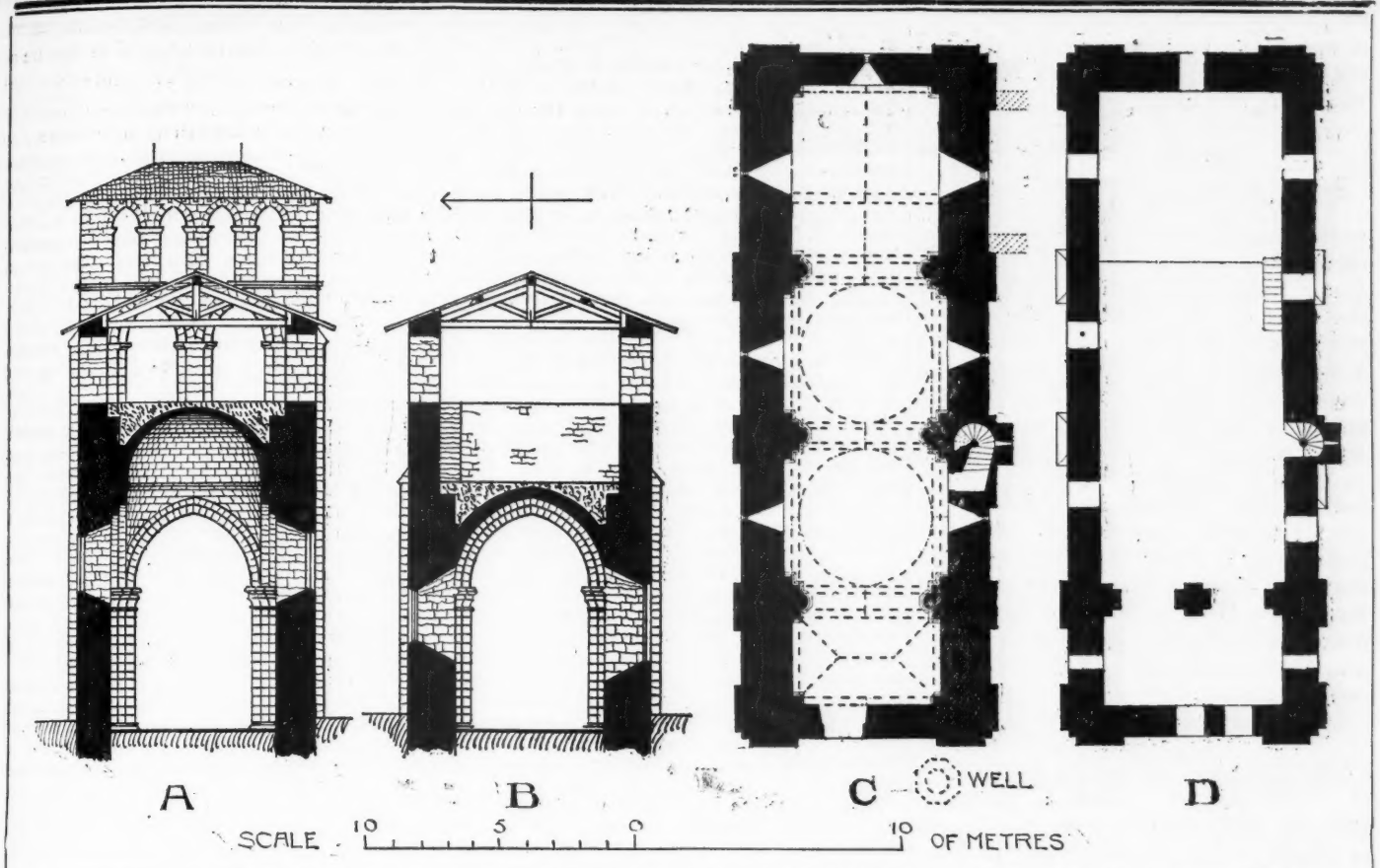
THE Charity Commissioners are about to establish a scheme for the future administration of this endowment. They intend, for the present, to close the school, and sell the site and buildings for not less than 9,500*l.* to the Vestry of the united parishes of St. Margaret and St. John, subject to a covenant that the building shall not be pulled down for at least twenty-five years hence; the Commissioners reserve a power to themselves for dealing hereafter with the charitable endowments. The school stands in what was Palmer's Village, on the south side of Caxton-street, between the walk locally known as Blue Coat Ring and the "London Scottish" Volunteers' drill-hall and headquarters. The triangular plot encloses the master's house, erected by some parishioners in 1709, and the girls' school, 1868. In the pediment of the south front of the boys' school, over a painting of a blue-coat boy, is written, "This School Founded 1688;" on the north front, below a statue of a scholar, "The Blewcoat School Built in the Year 1709." The school-house was erected at the charges of William Greene, owner of the still existing "Stag" brewery, after a design ascribed—yet, it seems, on dubious authority—to Wren.

Excavations on the Acropolis.

THE excavations of the Greek Government on the north slope of the Acropolis have brought to light an inscription of great importance to the history of Greek architecture. The date of the building of the Niké Temple on the Acropolis has always been matter of dispute. Some archæologists hold the temple to be the work of Cimon, and hence older than the Parthenon; others date it as belonging to the administration of Pericles, and others, again, put it as late as the middle of the Peloponnesian War. The new inscription, which dates about the middle of the fifth century B.C., deals with a sanctuary which was to be provided with a new entrance, and in which Kallicrates, the builder of the Parthenon, was to erect a temple and altar of stone. For reasons not yet fully stated, Mr. Kabbadias, the discoverer of the inscription, says there is no doubt that the temple of Niké is in question. The inscription was found below the grotto of Apollo—it had evidently fallen from a height.

Sanitary State of Eaton Bray, Beds.

DR. S. W. WHEATON recently presented a report to the Local Government Board on the sanitary conditions of Eaton Bray, in the Eaton Bray Rural District, and, as a result of his inspection of the parish, he reports that "the conclusion seems unavoidable that the former and present Sanitary Authorities of Eaton Bray have failed to carry out the duties imposed on them by the Public Health Act of 1875, more especially in neglecting to provide a proper water supply and a scheme of sewerage for their district." A perusal of the report appears to thoroughly justify this conclusion, though the condition of the parish appears from time to time to have been improved. There are in the village a number of old-fashioned timber-framed, straw-thatched cottages, as well as a collection of dwellings of an urban type, consisting of rows of houses with, in many instances, only a very small amount of curtilage in the shape of a narrow yard in the rear of each dwelling. Such dwellings were in some instances badly erected in the first place, and appear in many cases to have received very little repair since their erection; consequently a number of them have been closed by the action of the District Council as unfit for habitation. On the other hand, many of these dwellings have been recently placed in proper repair by the action of the District Council, and the narrow yards attached to them, which were obstructed by privies and other outbuildings, have been cleared of these obstructions and properly paved and drained so that the surface water may be carried off. Much, however, still remains to be done for the improvement of other blocks of dwellings in the village. A number of the old fashioned timber-framed cottages scattered up and down the village are untenanted, and are falling into ruin. Three or four houses of this description, occupied at the time of Dr. Wheaton's visit as dwellings, were unfit for habitation, owing to general dilapidation and from dampness arising from the inflow of rain water from the roof. The water supply is obtained almost entirely from wells; there are, in addition, two dipping places in the course of a spring, and water from streams passing through the place is used to a very small extent. There is no public water supply. The level of the water in the wells is subject to great fluctuations. Where situated in gardens, the wells are liable to contamination from surface washings, from manure placed on the surface, and by leakage from the neighbouring vault privies. The wells situated near houses are



A. Transverse section through first bay of nave, ooking east. B. Transverse section through choir, looking west. C. Plan of Church. D. Plan of Fortress.

Plans and Sections of the Church of St. Martial-de-Viveyrol, France. (*From "L'Architecture."*)

also liable to pollution from surface washings. It appears from the report that a supply of pure and wholesome water could be obtained from the springs which issue from the chalk downs near the village, and which might be conducted to stand-pipes in the village at a comparatively small cost. As an alternative, water could be obtained from bore wells made at different points in the village. The remarks about sewerage and drainage and the disposal of excrement and refuse relate to evil conditions similar to those dealt with in many other such reports, and it is to be hoped that something will soon be done to remedy the shortcomings referred to.

Municipal Work at the Brussels Exhibition.

ONE of the most successful collections at the Brussels Exhibition is in the form of a special group known as the "Palais de la Ville," and separately housed in a picturesque building of that name. The collection has been arranged by the Municipality of Brussels with the view of showing the extent of the work for which it is responsible, and M. Ch. Buls, the Mayor, has taken an active part in its formation. Complete plans of the town are shown, together with models to show the contour of the ground. Then there are plans of the sewage system and the water supply, also augmented by models which include full-size sections of various thoroughfares so arranged as to popularly illustrate what a roadway looks like underground. Skeleton plans of the Municipal schools are exhibited, plans of the electrical supply works, and a model with large scale plans of the principal dust destructor and refuse depôt. Photographs and drawings of the gas works have been lent for the "Palais de la Ville," together with photographs and models describing the working of the fire brigade, ambulance, and police services.

A French Fortress-church.

IN the issue of *L'Architecture* for August 28 M. J. Mandin gives a description and measured drawings of the interesting and peculiar little church at Saint-Martial-de-Viveyrol, of which the lower portion is a church and the upper portion a castle, or at all events a place of defence against attack. We give reduced copies of the sections and plans given in *L'Architecture*, with explanatory references. The first bay westward is barrel-vaulted and carries the low tower with its open arcade above, seen in section A, the upper stage of which is later than the rest of the building. The next two bays are vaulted with cupolas on pendentives. The fourth bay, longer than the others, forms the choir, and is roofed with a pointed barrel-vault as shown in section B, the flat filling above forming the floor of the fortress, this portion of which, as will be seen, is connected by a flight of steps with the higher floor over the nave. On the south side of the plan is seen the circular staircase leading from the church to the fort above. It is to be observed that there is a well close to the church door; this could however have been of no use to the besieged if they were driven from the church to take refuge in the apartment above. We may therefore take it that the whole building, church and all, was regarded as a fortress, a place in which to withstand a siege, and that the object of the upper floor was not so much to provide a refuge as for a place whence missiles could be discharged against the enemy. The building dates from the latter part of the twelfth century.

The Manchester Ship Canal.

IT is desirable that the financial state of the Manchester Ship Canal should be thoroughly appreciated, for we have frequently during the last few years pointed out that it is very undesirable that public funds should be given to the assistance of ordinary financial enterprises. The interest due to the Corporation of Manchester for the last half-year, which amounted to 112,500*l.*, was not paid, and the accumulated interest due to the Corporation is now over 500,000*l.* This sum it is not likely will ever be repaid, and must be regarded as lost by the ratepayers. It is equally clear that the interest on the mortgage debenture cannot continue indefinitely to be paid, for while part of it comes out of the net profits of the Bridgewater Canal, the other part is taken from the accumulation or reserve of the latter undertaking. There is only one course open. The present company should be wound up; its capital should be treated as lost, and the debt to the city of Manchester as an item which must be written off as a bad debt. A new company, with a capital on which the modest earnings of the canal can pay a percentage, would then be formed to take over the canal. The present condition of things is a financial absurdity.

The Tunnel under the River Hudson.

IT is expected that the work of completing the tunnel under the River Hudson from Jersey City to New York City will soon be recommenced, and that this unfortunate undertaking, which has already cost so many lives and so much money, will ultimately be completed. It will be remembered that the work was commenced as long ago as 1874, and that in 1881 no less than twenty-one men lost their lives by the water entering the working chamber. The work was soon after suspended, but some years later it was recommenced by Messrs. Pearson & Son, of London, and nearly four-fifths of the subaqueous portion was actually completed in 1892, when the work had again to be abandoned for want of the necessary funds. There is still some quarter of a mile of the tunnel to make, and rather more than a mile

of approaches, but it is now hoped that the work will be resumed by Messrs. Pearson & Son before very long.

A New Monument to Victor Hugo.

M. RODIN, the sculptor, whose promised monument to Balzac seems to be indefinitely postponed, has on the other hand been working energetically at the model of a monument to Victor Hugo, which is to be placed under the dome of the Panthéon. The poet is represented standing on a rock by the margin of the sea, clothed in a classic drapery which flies out in the wind, and guided or supported by Iris, as the messenger of the gods; at his feet are a group of Nereids. The effect of the whole is fine, but has not satisfied the sculptor, who intends to modify it a good deal. His other and not very fortunate monument to Hugo, the sketch of which figured in the Champ de Mars Salon, is to be placed, it appears, in the centre alley of the Luxembourg garden which forms the continuation of the Avenue de l'Observatoire.

A Present for the Czar.

THE French Government is about to present the Emperor of Russia with a handsome album in which each Department of France is illustrated by a water-colour drawing executed by an artist who is a native of the Department. Among the number is a view of the old quarter of Rouen, by M. Jules Adeline; a landscape in the Yonne, by M. Allongé; a figure symbolising the Haute-Garonne, by M. Debat-Ponsan; a view of the Port of Dunkerque, by M. Van Driesten; the cathedral of Clermont-Ferrand, by M. Richard; and the Seine at the Pont des Arts, by M. Hista. With these exceptions, unfortunately, the drawings are mostly mediocre, or worse; which seems a pity, considering how many capable artists France possesses.

THE PRESERVATION OF IRON IN BUILDING STRUCTURES.

BY H. C. STANDAGE.

PROBABLY the greatest number of patents in connexion with pigments are for paints to act as preservatives of iron. But although each patentee claims, and perhaps, firmly believes, that his speciality is better than any other product, nevertheless the perfect iron protective paint has yet to be formulated.

In the first place let us consider the nature of the iron used in structures. We shall then be better able to understand the chemical reactions that occur on the surface of the iron, whereby its corrosion is effected by the very paint that is laid over it to preserve it from atmospheric corrosion.

Iron, as we know, in constructors' work, whether wrought or cast, is essentially all metal, that is, it is free from adventitious bodies as far as the metallurgist can produce it. Steel is iron in which carbon has been made to commingle with its particles.

Now iron, whether wrought or cast, has a great affinity for oxygen, and if the iron is placed under suitable conditions the two bodies, iron and oxygen gas, will chemically unite and form oxide of iron. The brown or red "rust" on iron is an oxide of iron; there are many other oxides of iron, since oxygen unites with this metal in several proportions. Now most of these iron oxides are powdery substances; not a hard resistant body like the metal, but a soft powdery body that can be rubbed up between the fingers.

The "suitable" conditions under which oxygen unites with iron is when hydrogen is present in the form of moisture or water, the product of a union of hydrogen and oxygen gases. When you drop a little water on a piece of iron and leave it for some time, the liquid water disappears and a brown or red spot remains in its place. This spot of rust is an oxide of iron, and has been produced because the metal has exerted a greater elective affinity for the oxygen in the water than the hydrogen gas did, whence the oxygen and metal combine, allowing the hydrogen constituent of the water to escape into the air. Again, oxygen being a large constituent of the atmosphere, this element in moist air has a very large destructive influence on iron surfaces. If, however, the air be perfectly dry the oxygen will have no action whatever on the iron, but if ever so slight an amount of moisture be in the air, then the chemical union between the oxygen and the iron is at once set up, and when once this action is started it continues, whether the air be wet or dry, until all the metallic iron has become converted into oxide of iron, or "rust," as it is more commonly called. It is the object of all paints that are to act as preservatives to prevent this erosive action of humid air on iron. Iron preservative paints do this so long as they remain unchanged themselves by atmospheric action, but when once the paint is decomposed and the segregation of its parts commenced, then the rusting of the iron can also commence. But many of these so-called iron protective paints are actually the first to start the conversion of the iron into oxide, in this way: linseed oil, which is used as a vehicle for binding together the particles of pigment forming the paint, possesses glycerine as a constituent, and this glycerine is liberated from the oil when the latter enters into chemical combination with the pigmentary matter ground up in it.

Now, glycerine is a body which will not combine with pigments to form a paint, and, moreover, it has a great power of absorbing water, consequently if a paint that is laid over an iron surface evolves glycerine during some period of its career, that glycerine whenever it reaches the metal will set up erosion, and thus start the conversion of the metallic iron into rust or oxide of iron. From this we see that although a paint may shield iron from the action of atmospheric agencies, yet it may begin the destruction of the metal itself. This is a point that is too often lost sight of by inventors and compounders of paints for iron surfaces. When we consider that on some of the iron bridges that have been erected during the present century, tens of tons of iron in the shape of rust have been removed, it will be seen that the time can be calculated when such bridges will no longer be able to support their own weight, for the solid metal will have been reduced so much by corrosion as to be a mere skeleton of its original self. Now it is the behaviour of this glycerine in the paint which ought to be watched, because it is on the free, uncombined presence of this body or its combinations with other bodies that depend the preservative qualities of the paint.

It is generally conceded by architects, engineers, and paint compounders that either red oxide of iron (as Venetian or Indian red), or red oxide of lead (as red lead) form the best protective paint, and they explain this protective action on the theory that these oxides, by themselves imbibing oxygen from the air to form higher oxides, so prevent the undesirable union of the oxygen and iron, and also because these oxides, when compounded with linseed oil, cause the latter body to be rapidly converted into tough insoluble linoxide which, while yet hard and elastic, is not chemically acted on by atmospheric agencies. This theory is not half the truth; the true reason for the above two metallic oxides being the best pigments for forming the base of an iron preservative paint is this: red oxide of iron *combines* to a *great extent* with the glycerine which is eliminated from the linseed oil, but the red oxide of lead *completely* combines or absorbs this glycerine; the consequence of this partial and total absorption of the destructive agent, glycerine, by these pigments is that the erosive action that would be set up if the glycerine were free is prevented; in the case of the red oxide of iron partially, and in that of the red oxide of lead totally.

This, then is the chief point that paint compounders should pay particular attention to, viz., to make sure that the components of the paint are such as will not allow any free glycerine in the paint to be present.

I will now ask my readers' close attention while explaining how this may be done. Before doing so I would point out that my researches on the subject do not bear out the theory most recently advanced, viz. that the beginning of corrosion is due to carbonic acid in the air, and that the thin film of carbonate of iron that is thus formed is acted on by oxygen in moist air. In my researches I found that pure distilled water (*i.e.*, free from carbonic acid gas) corroded iron when placed in an atmosphere free from carbonic acid, also that iron, in the presence of carbonic acid gas in moist air, did not oxidise quicker than in moist air free from the presence of carbonic acid. I also found that iron filings would not ignite when projected into a jar containing a mixture of oxygen and carbonic acid gases, whereas, when iron filings are projected into a jar of oxygen gas, the metal so rapidly unites with the oxygen as to ignite.

As already mentioned, there are several varieties of oxides of iron, but the typical one that should be used as a paint is the sesquioxide (represented by the chemical formula Fe^2O_3); this is the bright red oxide commercially known as Venetian red. But (and it is important to bear this in mind) the commercial Venetian red is not a pure article, that is, it does not consist solely of oxygen and iron, but lime and other bodies are present, these bodies are added by the pigment manufacturer during the calcination of the iron salt with red oxide. The native oxide that in any way approaches the above chemical composition does not contain perhaps more than 70 per cent. of oxide of iron, the remaining percentages consisting of alumina and silica. Such an oxide is better, however, as a paint than a pure oxide of iron, answering to the above chemical formula, because the silica and alumina give the pigment a certain amount of covering power and binding qualities when the pigment is ground up in linseed oil. Chemically pure sesquioxide of iron does not possess such a good covering power, in fact the chemically pure oxide, when ground up in oil, would so "burn" the oil vehicle during the grinding as to partially decompose the oil.

Again, the artificially produced red oxide of iron called Venetian red is produced by calcining sulphate of iron mixed with sulphate of lime (gypsum) or baryta, usually the former. These bodies are used in the calcination to preserve the bright tint of the red oxide produced, but their employment is chiefly for increasing the weight of the product and thereby cheapening the cost of production. The presence of either of these two bodies, gypsum or baryta, in the paint is detrimental to its preservative qualities. On the other hand, if sulphate of iron is calcined alone to form the red oxide, more often than not a different oxide than the one desired is obtained; and, likewise, there is generally present either free sulphur or the radicle sulphuric acid, because in calcining ferrous sulphate a very great and prolonged heat is required to completely expel all the SO_3 (the formula for ferrous sulphate is $FeSO_4$, which, when heated, has the SO_3 radicle expelled, leaving FeO—iron oxide—behind in the red powder; consequently, if any free acid or sulphur be in the red oxide, such a pigment, when ground up in the oil, will sooner or later cause michievous decomposition to set up, whereby the protective qualities of the paint are considerably weakened. The theory underlying the use of sesquioxide of iron as a protective paint is this: the sesquioxide is the only oxide of iron which does not undergo incipient combustion (*i.e.*, does not change into a lower or a higher oxide, which all other oxides of this metal do), and also because this particular oxide does not set up decomposition in the oil in which it is ground, whence the oil vehicle dries or hardens into a tough impermeable skin that is protective against moisture and atmospheric influences, hence the paint formed with linseed oil and red oxide of iron dries and hardens very rapidly.

The theory of the non-activity of red oxide of iron is a very sound one, but the theorists who pin their faith to it have ignored one chief factor in such a paint, and that is the elimination of glycerine from the linseed oil, and the non-absorption of it by the pigment (the action of this glycerine on metallic iron has already been described). This glycerine is the secret and unsuspected foe, insidiously working destruction on the iron, although the coat of paint may be hard and dry on the exterior surface.

So far as the writer is aware, the presence of this glycerine in paint is not even suspected—much less known to be present—by compounders or inventors of paints for protecting iron surfaces.

Another important point that militates against the perfect preservative properties of red oxide of iron, as apart from metallic iron,

is the very great difficulty of obtaining the oxide free from accidental or intentional impurities. As red oxide of iron does not absorb *all* the glycerine that is eliminated from the oil during the drying process of the latter, and as this glycerine is a good conveyor of oxygen to the oil, all the conditions most suitable for causing oxidation of the iron are inherently present in a paint of which red oxide of iron is the base. Hence we find that paints made from oxides of iron are *not* perfect protectors of iron surfaces.

Let us now consider the question of red lead. There are several oxides of lead, but the red oxide is the best resistant of atmospheric influences on iron. This oxide is a compound of the monoxide and of the dioxide of lead, not a simple oxide, and it is probably due to this fact of there being two different oxides that *all* the glycerine (which is eliminated from the linseed oil vehicle) is absorbed when the red lead is made into paint. A few words concerning the behaviour of lead salts when compounded with linseed oil will explain the cause of the elimination of the glycerine. Linseed oil consists of oleic, margaric, and stearic acids united to a common base, glycerine. Now, when a salt of lead (as lead carbonate, lead hydrate, &c.) is ground up with linseed oil, the lead salts chemically unite with the oleic acid to form a chemical compound which chemists call linoleate of lead. As a consequence of these decompositions of linseed oil, the margaric and stearic acids (they are "fatty acids") are set free, likewise, the base, glycerine. The fatty acids, however, are absorbed by the linoleate of lead; the glycerine, however, does not unite therewith, but is merely suspended in the soapy mass. Now this lead soap gradually hardens and forms a skin of paint by absorbing oxygen from the air, and as the process of hardening proceeds, so the glycerine is gradually expelled from the soapy mass (linoleate of lead is called a lead soap), and eventually collects under the skin of paint and forms "blisters" on the paint skin. (If one of these blisters be pricked it will be found to be full of a watery fluid. This is the glycerine that has been eliminated from the linseed oil, and it is diluted with water which it has imbibed from the atmosphere while the chemical changes causing the skin of paint to dry, were taking place.)

There are other salts of lead which absorb a great portion of the eliminated glycerine, but not all of it. Red lead, however, does absorb it all, and it is for this reason alone that red lead is the best pigment for preventing oxidation of the iron on which a coat of paint is laid.

A compound of red-lead and linseed oil is waterproof, but any other compound made up of lead salts and linseed oil is *not* waterproof, because all other salts of lead, except the red oxide, form lead soaps, which are soluble in water. Unfortunately, lead paints, including red lead, cannot resist the influence of alkalies; therefore a red lead paint is not a perfect protective one for iron under all conditions of use (*i.e.*, submarine structures, &c.), for although a red lead paint is waterproof, not decomposed by the oxygen in moist air, &c., yet it is at once decomposed when brought into contact with alkalies.

From the above observations it is deducible that neither compound, red oxide of iron nor red oxide of lead with linseed oil, forms a perfectly protective paint for iron surfaces; in the one case because the iron oxide does not absorb the glycerine, and in the latter case because the compound is not proof against the chemical action of alkalies.

To obtain a perfect paint in all respects for the purpose of protecting iron from rust, the compound should be one that forms a thin, hard, elastic, durable, insoluble, adherent coating, and one which is resistent to atmospheric influences, while, at the same time, it should not undergo decomposition or incipient combustion by the components of the paint chemically reacting on each other.

All these qualities, except the last one, can be obtained by some one or other of the pigments at command, but the only pigment that completely absorbs the eliminated glycerine (which is the cause of all the mischief) is red lead. It is the presence of glycerine in a paint that renders it mixable, more or less, in water, and it is the object of adding "driers" to a paint to combine or imbibe the glycerine that is in the paint, so that the union formed between the fatty acids of the oil and pigment shall harden and dry.

Now all adventitious additions to a paint, in the shape of "driers," lessen its stability and protective qualities on iron surfaces, for the introduction of a "drier" means the introduction of an acid into the paint, and this acid will eventually set up corrosion or oxidation of the metallic iron.

In the course of some researches made by the writer, on compounding linseed oil with various pigmentary bodies, he discovered a singular property in one such compound, viz., that it dried up in a very short time and formed a hard, compact mass, that gave forth a metallic ringing sound like that produced when a piece of steel is struck. This singular compound is prepared by heating together until of the consistency of honey

1 part of dry white lead,
1 „ „ „ flake litharge,
1·4 „ „ „ raw linseed oil,

and while the mass is still hot and fluid stirring in sufficient of a mixture of chalk, yellow ochre and red oxide of iron in equal parts, to form a stiff dough or putty. This compound, of course, is not suited for a paint, owing to its thickness, but as it is one that is as hard as a stone when dry and *impermeable to water and to alkalies*, if is one eminently suited to form a basis of constructing a preservative paint for iron surfaces, particularly so as the hard mass does not suffer incipient combustion or decomposition.

A PERFECT paint should be simply a combination of pigmentary matter with *linoxine* (linoxine is the oxidised fatty acids of linseed oil) which is more commonly known as linseed-oil varnish. To produce linoxine, raw linseed oil is heated with a borate of a metal, the best of which is borate of manganese, whence the oil-varnish that is produced is essentially manganese linoleate. This substance is one of the best commercial articles for use as a vehicle in which to grind up pigments to form a paint. I have found, however, the following method of producing an oleo-resinous vehicle for grinding up paint nearly perfect, as the paint —no matter what be the chemical nature of the pigment used, whether an oxide, sulphide, carbonate, &c.—sets hard and dry in a very short time, and yet elastic, and never cracks nor peels off, nor blisters, because the compound, while drying, absorbs oxygen, and dries solidly throughout its depth, instead of drying into a skin on the surface with a bed of soft paint underneath, which most paints do.

Heat in a copper vessel raw linseed oil to 450 deg. or 500 deg. Fahr., not higher, but do not continue the heating when acrid fumes are given off. In a separate vessel put 2 oz. of amber chips per gallon of oil to be used, cover the vessel with the lid, and submit the chips to a heat sufficient to soften them and evolve dense whitish yellow fumes (do not let these fumes reach the source of heat, as they are inflammable), then pour the heated oil into the vessel containing the amber through a hole in the cover, so as not to let the fumes escape, as it is the object to condense these fumes or absorb them in the hot oil. When the fumes have all been absorbed by the oil, dilute the mixture with an equal bulk of raw linseed oil (hot), and strain the fluid through wool placed in the neck of a funnel or else through felt filtering bags. This product is the vehicle desired, and it is usable directly it is made. If a layer of this vehicle be exposed on a plate of glass, china, or any other non-absorbent surface, it will dry to a very pale yellow, tough, elastic skin, solid throughout its depth, and perfectly insoluble in the ordinary medium used for dissolving oil or resins.

In the compound of white lead litharge and linseed oil previously referred to there are some peculiar properties. When the compound is prepared from the ingredients used in the proportion named, the product is a tough, elastic mass that can be spread on any surface, yielding a flexible layer of waterproof and acid-proof material. This compound, in fact, is identical with that which is laid on leather to form patent, or enamelled leather. When the compound is dried by steam heat it is hard, yet flexible, and may be coloured with pigmentary colouring bodies, but in such a case it exhibits most peculiar and diverse properties, according to the chemical nature of the body mixed up with it. For example, if chalk or yellow ochre or red ochre be used, a flexible layer of a waterproof body is obtained, suitable for sail-cloths, tarpaulins, &c. If common plumbago be mixed with the compound, a solid yet elastic body is obtained, as much like indiarubber as possible, and possesses many of the peculiar properties exhibited by gutta-percha, while it can be softened by heat, or moulded any shape. If red lead be compounded with it, the compound, or putty, obtained can be moulded or pressed into any shape, but it is a very long time before setting hard and stiff. Whereas, if yellow or red oxide of iron, and powdered chalk and sand be mixed with it the compound (of linseed oil and lead carbonate and litharge), a hard, inflexible compound, with the metallic sound referred to, is produced; this compound is practically insoluble and unbreakable.

There are many other peculiar properties exhibited by this compound of white lead, litharge, and linseed oil, but I have not yet fully determined same. The above facts, however, are sufficiently valuable to set experimenters to work in finding a more perfect vehicle than linseed oil alone for making a preservative paint for iron. The paints now on the market as iron protection paints are essentially compounds formed of lead soap, glycerine, and pigment, or colouring matter. But a paint to be perfect should simply consist of pigment completely united with the oil and without the presence of the obnoxious glycerine; when the latter substance is present the paint cannot be a perfect protective covering to any surface, because instead of the oil acids becoming converted into linoxine, part of the oxygen absorbed unites with the glycerine to form glyceride, or some other undesirable body, which sets up oxidation of the metallic iron. H. C. S.

THE CONGRESS OF ARCHITECTS AT BRUSSELS.

OF the many gatherings which have been organised this summer in connexion with the Brussels International Exhibition none have been arranged under such favourable auspices as the Architectural Congress, and we may add that we have but rarely heard of any meeting of a technical profession that has been so well supported by those outside the profession. We have frequently heard of members of princely houses allowing their names to appear as honorary presidents, and Continental Governments have also, from time to time, signified their approval of some special gathering, and have gone so far as to send a minister, or a high official, to attend the opening ceremony; but to our knowledge no meeting of architects has as yet been attended by a reigning sovereign whose patronage took the form of an active participation in the proceedings, as was the case with the King of the Belgians. The Minister of Public Works, M. de Bruyn, and the permanent Mayor and Governor of the capital, M. Charles Buls, also took a prominent part in the discussions, M. Buls also ably translating line for line Professor Aitchison's remarks in one of the discussions; in other words, taking upon himself the onerous task of interpreter. M. Buls also translated from the German a valuable paper by Baurath Stübben, of Cologne, which was subsequently printed in French. The King not only attended the reading of a paper, as promised, but stayed for a protracted discussion, and added to his courtesy by inviting some of the members to join his house-party at Ostend. To those who know how scantily architecture and surveying is recognised by most Governments, let alone by royalty, it must appear that our Belgian brethren have been rather exceptionally favoured. It would seem, however, that the body of architects at Brussels and in the provincial centres of Belgium have not only striven for official recognition as a corporate body, but have individually endeavoured to become indispensable to the State as architects, and also to fill many of the more important honorary appointments which tend to lend prestige to the profession of the holder. Where in England we almost invariably find members of the Bar or solicitors, in Belgium the architect has been much in evidence, and, though perhaps only indirectly at times, this has done much to bring the building professions to the front. Belgian architects holding such offices have also done much to cultivate that taste for buildings of architectural pretensions which is so noticeable in their country, and, now that the design and execution of a structure has become a matter of popular interest, it naturally follows that the standing of those who are responsible for the most important buildings of their locality has very perceptibly risen.

The occasion of the Brussels gathering was ostensibly the International Exhibition, but the date for the meeting was selected with the additional view of coinciding with the celebration of the twenty-fifth anniversary of the

origin of the Belgian Architectural Society ("Société Centrale d'Architecture de Belgique"). This body was founded in 1872 with a membership of fifty-nine; it now has 264 members. The entire management of the Congress was in the hands of this society, which had a special committee to attend to this matter. The president, M. Valère Dumortier, acted as chairman, with M. H. Bernimolin as hon. sec. The programme, including hotel and travelling arrangements, was particularly well carried out, and though the funds of the society did not permit of lavish hospitality, the visitors were practically the guests of the Belgian members from Saturday till Thursday, with a nominal registration fee of 25s. An important point in regard to the preliminary arrangements was that full programmes were obtainable some weeks before the Congress, and that every rendezvous, the facilities for reaching it, &c., were specified with commendable clearness. The usual collection of all manner of tickets so common at gatherings of this description was superseded by a simple "pass," on which an extract of the programme was printed. The agenda for the discussions was very clearly defined, and the papers were not only printed in full, but also in the form of extracts. The locality for the meetings was well chosen, *i.e.*, in the centre of the hotel district, between the two principal railway stations on the line of the principal trains. The Arts Club and the Society of Engineers put their rooms at the disposal of the members, and the lecture hall of the Architectural Society, which was used for ordinary meetings, afforded ample accommodation. Ladies travelling with members could participate in the excursions, and were invited to attend the opening ceremony, and a dance was specially arranged for them. Guide-books for the exhibition, &c., had been printed for the use of members, and with the aid of which much time was saved. Perhaps the only slip on the part of the executive was the omission of any dress regulations. This led to confusion and needless irritation, for at the opening conversazione all costumes, from a tourist's tweed to evening dress, were to be seen.

The Congress was thoroughly representative of the leading Continental nations and there have been but few occasions when so many of the recognised leaders of the architectural profession have met together. There was also not that great difference in numbers between home members and foreigners as is usually the case at international gatherings. The total number of members was 330, and of these only about 150 were Belgians. The remaining 180 were made up as follows:—About fifty Germans, about fifty Frenchmen, about twelve Dutchmen, and a few representatives each from Austria, Russia, Scandinavia, Switzerland, and Italy. Of non-continental countries represented there was America with three architects, and England with Professor Aitchison, Mr. John Slater, Mr. Edwin Sachs, and Mr. Percy Hunter.

It was evident throughout the proceedings that the German deputation was the best organised, and in fact the German contingent were travelling together under the auspices of the Rhenish Architectural Society. It has practically become a matter of principle with the German technical professions to see that there is a proper representation at gatherings of this kind, or none at all. As with trade, so with the professions, the Germans are systematically pushing themselves to the front, and the result of this policy is that foreign Governments and Municipalities are frequently giving important commissions to the German architect or engineer and calling for his advice on many matters. The idea of working together for the common good of the German Empire subordinates all petty controversies among individuals or nationality. By dint of careful management the German delegates are now always taking the leading part at Congresses, with the natural result that France, let alone England, take secondary positions. To name only one tangible result of the German policy, we see Herr Stuebben, the City Architect from Cologne, called in to advise the King of the Belgians on various technical matters. He has been asked to join the Royal house party. No Englishman has been as honoured in this way. Yet the subject for which Herr Stübben is consulted is not only one in which English specialists excel, but one in regard to which English capitalists are considerably interested. We had the good fortune of so distinguished a representative as Professor Aitchison, to whom the delegates of other countries were constantly showing their marked esteem; but to further the prestige of the English profession on such an occasion, quite apart from any question of utilising the results of the Conference, it is necessary to have a larger deputation, and one that is organised and for which the members will do some work. If there is to be a head to the deputation, presence, powers of oratory, and knowledge of foreign languages must be considered in his selection, and, perhaps above all, that *savoir vivre* which prevents our appearing so insular in the eyes of the foreigner. Why should our representatives appear in morning dress to meet the King and his ministers when every one knows that evening dress is *de rigueur* at Continental functions? Why should no Englishmen respond to the toast of "The Visitors" at the official banquet, when every other country responds? These matters may appear trivial, but a good deal depends on them.

To give some idea of the thoroughly representative character of the gathering, as far as the Continent is concerned, the following list of visitors who were elected *membres d'honneur* may be of interest:—

Italy.—M. Cadolini, President of Italian Society of Architects and Member of the Italian Parliament.

Russia.—Count Luzor, City Architect of St. Petersburg, Member of the Russian Academy, and a Privy Councillor. M. Gibert, President of the Russian Architectural Society.

Germany.—Herr Stuebben, President of the Amalgamated Societies of German Architects and Civil Engineers, City Architect and Alderman of Cologne, and President of the Rhenish Architectural Society.—Herr Hinckeldeyn, Architect-in-Chief of the Prussian Public Works Department, Member of the Ministry of Public Works, and President of the Berlin "Architekten Verein."—Herr Von der Hude, President of the Berlin Architectural Society (Verein Berliner Architekten).—Herr Mayer, President of the Wurtenberg Architectural Society.—Herr Braüler, President of the Aix-la-Chapelle Architectural Society.

Portugal.—M. Pedro d'Avila, Architect to the King of Portugal.

Holland.—M. Salm, President of the Netherland Society of Architects.—M. J. Cuypers, the President of the "Architecture et Amicitiae" of Holland, and the last recipient of the English Institute's gold medal.

Sweden.—M. Clason, President of the Society of Architects and Civil Engineers at Stockholm.

France.—M. Charles Garnier, President of the "Société Centrale des Architectes Français," and Member of the "Institute."—M. J. Corroyer, the Superintendent Architect of Ecclesiastical Buildings in France, and Member of the "Institute."—M. Guillaume, Director of the French Schools at Rome, and Member of the "Institute."—M. Loviot, President of the Société des Architectes Diplomés de France.—M. Trélat, Director of the Architectural School at Paris.

It goes without saying that some of the leading architects of Belgium were among the *membres d'honneur*, whilst among the "ordinary members" were such men as M. Bonnier, the architect-in-chief for the Paris Exhibition of 1900; Professor Wagner, of Vienna; M. Wielemans, the City Architect of that city, &c. Curious to say, perhaps the majority of Continental Honorary Correspondents to the Royal Institute of British Architects were present, as well as several Gold Medallists. The latter distinction, by the bye, is probably the most coveted on the Continent, and M. Cuypers' election has been very much appreciated.

The proceedings of the Congress were divided under three headings:—*i.e.*, 1. Conferences; 2. Excursions; and 3. Entertainments. As a rule the conferences were planned to be over before noon, whilst the excursions and entertainments filled the afternoons and evenings. This was a better arrangement than giving up entire days to the discussion of technical subjects to be followed by days devoted solely to the social side of a gathering of this description.

The Congress was formally opened on Sunday, August 29, at one o'clock, but prior to that the Minister of Public Works had already opened a small architectural exhibition held in connexion with the meetings. The hour for the last-named function was 10 a.m. There had also on the preceding evening (Saturday) been a conversazione, at which there were ample opportunities for introductions, &c. The opening ceremony, which, as already stated, was attended by the King, commenced with the usual formal declarations as to organisation, officers, members, &c. Then came the usual opening address by the President, which in this case had for its subject a brief recapitulation of the work of the Belgian Architectural Society. The Minister of Public Works followed with a very spirited address on architectural matters, as seen from the point of view of the Government, and then the meeting was favoured by a very classic discourse by the Mayor, who took the occasion to welcome the foreign members on behalf of the municipality. The *membres d'honneur*" had already been previously introduced to the King, to the members of the Government present, and to the representatives of the municipality, and they were accorded seats on the dais, Professor Aitchison being placed next to the Minister referred to above. The first paper read at this opening session was by M. J. de Waele, who holds a professorship at the Academy Schools of Ghent. His subject was "The Restoration of Public Monuments," and in accordance with the agenda he had to answer the following questions:—

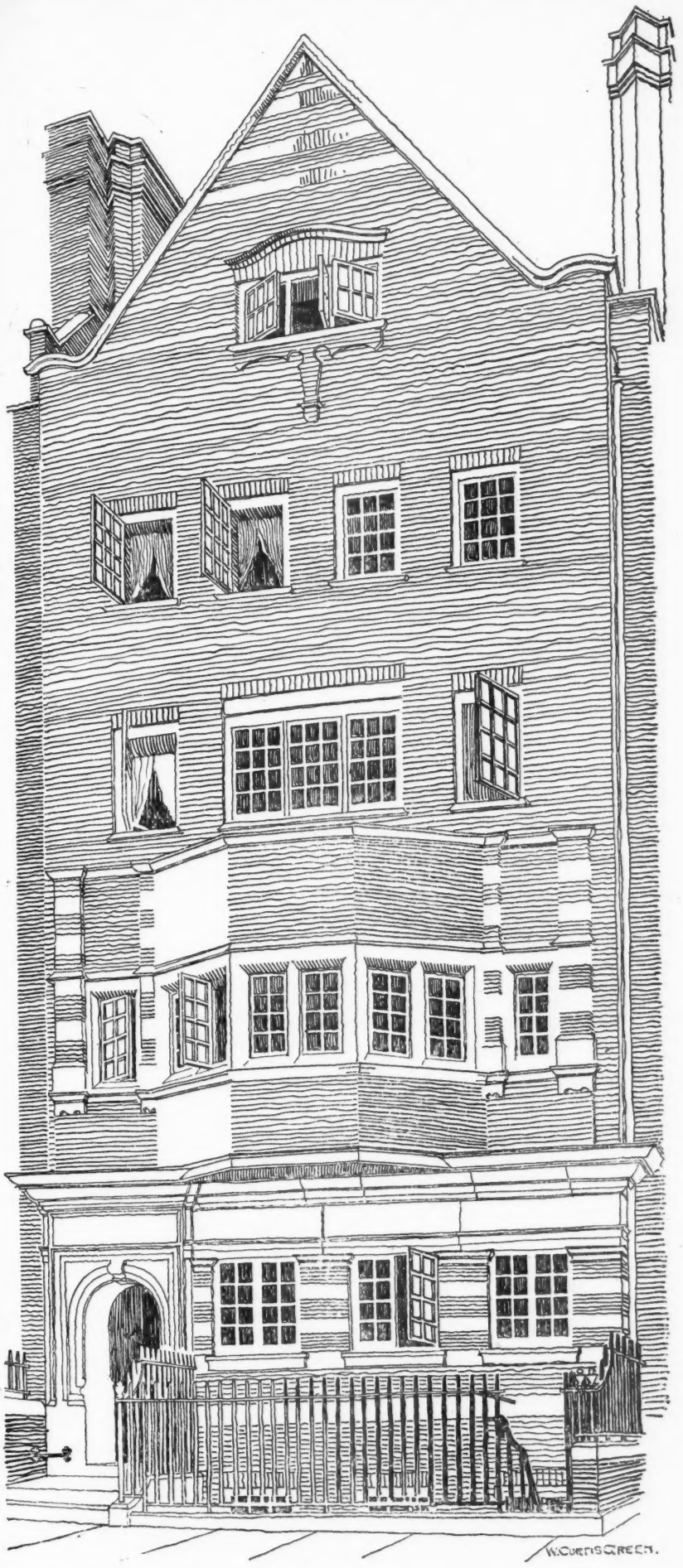
1. Is it admissible to correct stylistic or technical errors in an ancient monument?
2. May parts of a monument, which have not been completed at the time of erection, be subsequently finished?
3. Is it permissible to destroy such parts of a monument as are considered to be out of keeping with the main portions of the work?

It would lead us too far to speak of the paper in detail, or of the long discussion that followed this very controversial subject. The ground has already been frequently covered on various occasions in this country, as Professor Aitchison very pertinently remarked. In fact, perhaps, for once our Belgium colleagues could learn something from us and save themselves much time and labour by studying the results of an experience which has so often been dearly bought in our cathedral towns. The feeling of the meeting was certainly strongly against that modernising of monuments so frequently practised in France and Germany under the misnomer "restoration." Of those who participated in the discussion we would mention that M. le Bruyn again very drastically presented the views of his Government, whilst M. Buls spoke in the name of archæologists, and Herr Stuebben as the representative of a civic authority with such traditions as Cologne. The King of the Belgians did not fail to mark his approval of the general tendency of the discussion, which he listened to for quite two hours. The Sunday afternoon and evening were spent at the International Exhibition.

The Monday forenoon was devoted to the discussion of the architectural education question, followed by a short paper on the application of iron for the architectural treatment of modern façades. The education question was in the hands of MM. L. Cloquet and J. Benoit. The point under discussion was whether the young architect should be taught in schools and according to fixed programmes, or if he should be allowed the greater freedom of the atelier combined with classes under the auspices of some technical association of practical men. The subject, as treated at Brussels, was essentially of local interest, but those who are studying the question of education would do well to obtain the verbatim report of the meeting, which will be published, together with the reports of the other conferences, at a cost of 10 francs. The proposed distribution of subjects and time should be of particular interest to the Architectural Association. The paper on the application of iron in the architectural treatment of buildings was by M. Vierendech. Any one passing through a Brussels street will be struck by the various applications of metal work in modern façades. Stanchions and girders are no longer being hidden away, but have become prominent features in the designs.

After the forenoon meeting on Monday there was a reception in the town hall, which was thrown open to the members, and then followed a very well-arranged excursion to the principal buildings of Brussels, commencing with the Palais de Justice, and ending with an interesting estate which is being developed on the north-east of the town. In the evening there was a very successful banquet. As at the opening meeting, Professor Aitchison sat on the right of the Minister of Public Works. The number of speeches was rather too large, and some were certainly far too long.

On Tuesday the forenoon meeting was devoted to a discussion of the vexed question of architectural diplomas. M. Bonnier of Paris, opened the conference with a very interesting



Sketches of London Street Architecture.—XVIII. 47, Palace Court-road, W. Mr. L. A. S. Stokes, Architect.

paper. The requirements formulated for the diploma were, however, much too severe for practical purposes, and Professor Aitchison emphatically expressed this opinion. Nevertheless, M. Bonnier's paper should call for the attention of the Royal Institute as an extremist expression of what many Continental architects desire. The Tuesday afternoon was spent at the Abbaye de Villers, which is situated abou an hour out of Brussels. The ruins of this monastery are of considerable importance, and a very interesting description was given on the spot by M. Ch. Licot, who is entrusted with their preservation, and they were illuminated after dark.

Wednesday was spent at Antwerp, the conference taking place in the historical Council Chamber of the Town Hall in that city. The members of the Congress met at an early hour to use the special train which had been put at their disposal, and were received at Antwerp in turn, first, by the local Architectural Society, then by the Royal Museum Commissioners, and finally by the Municipality. The subject before the meeting was the "Caisse de Défense" of our French colleagues, and the opening paper was read by M. Ch. Lucas, who is the secretary of the fund. The paper urged the desirability of some general rules for funds of this description, and the necessary headings were formulated by M. Lucas, whose proposals received the full approval of the French and Belgian members present. Again, it is impossible to enter into details as regards the proposals made, but the Royal Institute might well give its attention to the advisibility of supporting professional test cases. Architects would, perhaps, be able to obtain a better hearing in our law courts if the French methods were adopted. After the conference a Government steamer took the party round the harbour, and lunch was provided on board. Then followed a drive through the town. The works in hand for the new railway station created considerable interest, as also the new central hall at the Casino in the Zoological Gardens. On their return to Brussels the members separated for a short interval, to meet again at the Town Hall, where the Mayor's entertainment was given.

Thursday, the 2nd inst., was the last day of the Congress. The conference was devoted entirely to questions of copyright, papers being read by two Brussels barristers, MM. H. Brunerd and P. Jannsens, who act for the "mutual defence fund" of the Belgian architects, and by M. Gustave Mankels, the Vice-President of the Société Centrale. On the Continent great efforts are being made by the leading architects to protect their work from piratical publication and from being copied. Their ambition is to have buildings classified as "works of art" in the various Copyright Acts of different nations, and they desire to guard themselves against their work, or part of it, being copied by builders and others. The papers before the conference were certainly the most businesslike that have as yet been read on the subject, though we are still of opinion that copyright in the designs of buildings is an idea which is practically all but unworkable. On Thursday afternoon an excursion was again arranged, followed by a visit to the Royal Opera House, at which seats had been reserved for the members. With the visit to the opera the Congress closed; but a large number of the foreign members are now at Ostend, where they propose spending a few days together.

Taken as a whole, no architectural gathering could be more successful, and though little was done in the way of describing modern work, there has seldom been more of general interest to the profession in the proceedings of such a Congress. Practically every meeting touched on matters of vital importance to architects in practice. Besides the public conference, the amount of interchange of ideas and experience, as well as the general harmony of the proceedings, was remarkable. It was only regrettable that the English profession was not more numerously represented.

SKETCHES OF LONDON STREET ARCHITECTURE.—XVIII.

OUR illustration this week is of a small frontage in Palace-court, Bayswater. The building is in brick, with stone dressings. The architect was Mr. L. A. S. Stokes.

COMPETITIONS.

POLICE STATION AND COURTHOUSE, HALIFAX.—The Watch Committee of the Halifax Corporation have decided to recommend the Town Council "to adopt the plans marked 'Victoria' for a new police station and courthouse, with alterations as recommended by the sub-committee, and that Messrs. G. Buckley & Son, the authors of the said plans, be instructed to prepare working drawings, specifications, and bills of quantities, and obtain tenders for carrying out the various works required in connexion with the erection of the building, at an estimated cost of 11,600*l*."

MUNICIPAL BUILDINGS, RUGBY.—At a recent meeting of the Rugby Urban District Council, the Special Committee for selecting plans for municipal buildings reported that

they had considered the thirty-nine sets of plans submitted in competition, and recommended the Council to adopt as the design for the first premium the plans marked "Avon B," and to award the second premium to the author of the plans marked "Rataplan." The Committee further recommended that the authors of the design "Avon B" be engaged to carry out the work, and that the Council instruct them to proceed at once with the preparation of the necessary drawings, &c., so as to be able to commence the work early in the new year.—Mr. Loveday contended that it was a farce to place two sets of plans before the Council and ask them to vote upon them, when they had not had an opportunity of examining the others that had been sent in.—Mr. Mumford remarked that it was generally understood it would not be possible for the whole of the Council to go through all the plans, and the matter was referred to the Plans Committee, who undertook to pick out the most suitable and then report to the Council.—Mr. Butcher thought the Plans Committee might have brought four or five plans for the Council to select from. He thought they might see some of the other plans. On the proposition of Mr. Mumford, seconded by Mr. Buchanan, it was decided that the seven sets of plans from which the final selection was made by the Committee should be arranged in the Council Chamber, so that each member should have an opportunity of inspecting them.

Illustrations.

"PADDOCKHURST," SUSSEX.

THIS house, the property of Sir Weetman Pearson, Bart., M.P., is beautifully situated about four miles from Three Bridges, Sussex. The house was greatly enlarged by the previous owner, Mr. Whitehead, from designs by the late Arthur Cawston, who, amongst other things, built a large music saloon.

The present owner has largely remodelled the whole of the interior of the house, and also built a new wing which is the subject of the present view. This wing contains a dining-room 45 ft. by 20 ft., panelled in solid Spanish mahogany, with a chimney-piece at either end the full height of the room, executed in alabaster and Pavonazzo marble. Above the panelling is a plaster frieze, 4 ft. 6 in. high, representing the growth and history of locomotion, designed and modelled by Mr. Walter Crane.

Opening out of the dining-room is a winter garden, with stone groined roof carved by Mr. W. S. Frith, and beyond is a conservatory, 90 ft. long, divided down the centre by a row of columns supporting the roof, the whole executed in teak; the vista from the dining-room is closed with a marble fountain at the end of the conservatory let flush into the floor. Over the dining-room and winter garden are two floors of bedrooms, all finished and fitted up from special designs by the architect.

The terrace wall and fountain are in course of construction in accordance with the view. New entrance lodge and gates have also been erected, and two other lodges are in course of construction.

The gardens and the houses are being entirely remodelled and rebuilt, under the care of Mr. H. E. Milner, and will be unusually perfect and complete, while the farm buildings, erected by the late owner, are amongst the most extensive in the country.

The whole of the work has been carried out without contract, Sir Weetman employing his own labour, and Mr. S. E. Wallis acting as clerk of the works. Local stone has been used throughout.

The mahogany work has been executed by Messrs. Gillow, the marble work by Messrs. Burke, and the heating by Mr. Rawlings. The ornamental plaster ceilings are by Mr. Priestley.

ASTON WEBB.

INTERIOR VIEWS, CITY BUILDINGS, OXFORD.

VERY little need be said descriptive of these views, which speak for themselves. The whole of the interior stonework is Corsham Down, and the joinery is of wainscot fumigated. The dado of the main staircase is of polished Hopton Wood stone, and dark brown Derbyshire marble.

The Town Hall is finished entirely in modelled plaster, decorated in colour. The modelling was the work of Mr. F. E. E. Schenck.

The furniture shown in the view of the banqueting-hall was a collection of antique furniture lent for the opening ceremony, on which occasion the Mayor and Mayoress received in this room. The columns of the fireplace are of Fosterley marble, the remainder being of stone. There is a small apartment over, which serves as a musicians' gallery. The dog grate and other metal-work is by Mr. Nelson Dawson.

HENRY T. HARE.

VILLAGE HALL, CLAVERTON, BATH.

THIS building is being erected to supply a long felt want in the picturesque district of Claverton. At the present time there is no room available in the neighbourhood for public meetings of any kind.

The walling is of local stone range work, with Combe Down stone dressings throughout, and the roofs will be covered with green slates. The interior is to be lined to a height of 5 ft. with rich brown salt-glazed bricks, and immediately above is the white plaster. The roof has open principals and the rafters are also exposed; the whole will be stained dark brown. The floor is intended to be laid with wood blocks, and the whole of the windows are to be filled with clear glass in lead lights. In designing the building an effort has been made to adhere to the simple yet quaint characteristics of the stone buildings of Old Claverton. The total cost of the building, including land and boundaries, will be only 500*l*.

Messrs. Mannings & Mould, of Bath, are the contractors, and the architects are Messrs. T. B. Silcock & S. S. Reay, of that city.

SCULPTURE.

THE plates of sculptural subjects given in this issue formed two of the finest and most important exhibits in the old Salon at Paris this year.

M. Mercié's monument to Mdme. Carvalho is an example of a class of work with which his name has been a good deal associated; a symbolical bas-relief figure, with the head in higher relief than the rest, and the drapery and the indications of the figure gradually lowered in relief till at some points they nearly blend with the ground plane. It is an essentially architectural treatment of a sculptured monumental figure, the lines of the architectural stele being predominant and those of the figure subordinated to it.

The bronze group of "Le Poète" or Pegasus formed M. Falguière's principal sculpture subject this year, which as usual occupied the central position facing the main entrance to the sculpture court at the Champs Elysées. The idea is too simple and obvious to need any comment; the choice of subject has perhaps arisen partly from the sculptor's desire to treat an equestrian group without departing from the class of purely ideal subjects which he generally prefers to treat.

MAGAZINES AND REVIEWS.*

THE *Art Journal* includes a short article by Mr. S. J. Fisher on Old Palace Yard and Westminster Abbey, chiefly occupied with a review of the various suggestions that have been made for providing a monumental chapel for continuing the list of memorials of the illustrious dead; a subject on which we have already expressed our opinion. Mr. Fisher, we must admit, does not seem enthusiastic about any of them. Mr. Robert Fisher's illustrative sketches are very good. Mr. Scott Morton's "Art in the Home" article for this month contains some good practical and æsthetic suggestions in regard to libraries. Mr. L. B. Thompson contributes an interesting article on "Shells" and their use in art, illustrative and decorative.

The *Magazine of Art* gives an illustrated article to the work of a young French goldsmith, M. René Lalique, whose designs, however, strike us as rather eccentric than beautiful, except the silver spray illustrated, which is mere realism in metal. There is fine character however about the design for a diadem, consisting of a face with luxuriant hair worked on each side into massive conventional scrollwork. Those who are interested in art-education and the development of the faculty of design in young students should look at the article on the People's Palace Art School, and the illustrations of designs made or work executed by the pupils, some of which are excellent. The same issue contains an article on Gillray the caricaturist (whose refined face seems in curious contrast to the often cruel and brutal character of his pictorial satire), and a continuation of the illustrations of the Boulle work in the Royal collection at Windsor.

In the *Nineteenth Century* Mr. W. H. Mallock writes a trenchant article with an unfortunate title—"The Buck-Jumping of Labour;" unfortunate, because it will puzzle and be a stumbling-block to just those men who might get good advice from it, viz., the artisans who are hounded into strikes by their unions. The following paragraph, however, is intelligible enough to readers of every class, and artisans who allow themselves to be led like sheep had better ponder it:—

"Considerable as the powers may be which many of the labour leaders may have possessed or may possess at this moment, they have not been powers by which the efficiency of civilised industry is either advanced or maintained. Some of these men doubtless have been and are skilful manual labourers; but not one of them has belonged to that class of master-minds who, by invention, enterprise, or industrial generalship, render labour, whilst stationary as measured by its amount and quality, more and more efficient as measured by the result produced. So far as the labour leaders have influenced production at all, they have influenced it by resisting improved industrial methods, not by devising or introducing them. In other words, they have organised productive labourers, but they have never shown themselves capable of organising productive labour; and the object with which they have organised the labourers has been not only not production, it has been the stoppage of production. It has been not to help the labourers to produce more, but to prevent them from producing anything. . . . The marked deficiency in the labour leader of any of those faculties which make industry more and more productive, and to which the material progress of the whole world has been due, might be set down as an accident from which no conclusion could be drawn, if it were not a fact of which there are two natural explanations. One is, that the task which the labour leaders have accomplished successfully is incalculably easier than the task for which they have shown no aptitude. To organise obstruction, which they continually do, is a very simple thing; to organise production, which they they have never done, is a very difficult thing: and the power to do the one is in consequence common, whereas the power to do the other is, by comparison, very rare. A hundred thousand men could organise the blowing up of the Forth Bridge for every one man who could superintend the building of it. The other explanation is that if the labour leaders did, as a fact, possess the faculties necessary for successfully organising production, they would be organising it and making their fortunes by it, and would not be organising obstruction."

The *National Review* contains an article by Mr. H. H. Statham on the "Treatment of Ancient Buildings" to a certain extent polemical, only it does not take the side of any particular society or clique, but urges the view that each case of restoration is to be decided on its own merits and in regard to special circumstances, and not according to any hard and fast rule to be applicable to all cases. The article is, in fact, an attempt to sum up, in a judicial spirit, what the author of it regards as the common sense of the philosophy of restoration, and we may invite those who are specially interested in the subject to consider the views there expressed.

In the *Antiquary* we find a note as to the recent explorations at Furness Abbey by a small body of antiquaries led by Mr. St. John Hope and Chancellor Ferguson. An enormous mass of earth and rubbish has been taken away, and the searchers were rewarded by the clearing out of what they believe to be the Abbot's buildings. The work will be resumed during the present month. The same issue contains the second instalment of Miss Peacock's article on "Domestic Mortars," with illustrations of several very interesting examples.

Under the title "A New Note in American Sculpture," *The Century* gives some illustrations of portrait sketches by a young lady sculptor, Miss Bessie Potter, which, however, are merely pretty clay figurines of women and girls in their everyday attitudes and dress; there is nothing "new" about this, though these examples shows a decidedly clever and facile

* The object of these notes is to point out anything in the contents of the current magazines which is of special interest to our readers, with occasional brief criticisms on the views expressed in such articles. When a magazine which has been sent to us is not noticed, it is because that number contains nothing that it is within our province to comment upon.

hand. The American magazines are in fact rather too persistent in calling on the world to wonder at the achievements of American sculpture, which one would say seems to need a good deal of advertising.

The *Fortnightly Review* contains an interesting account of an episode in Dürer's life, his visit to the Netherlands, with some notes of Dürer's own recorded impressions and criticisms on some of the artists whom he met, or whose works he saw on this occasion.

Scribner gives us some notes and sketches of the Tennessee Centennial exhibition, where among other things there appears to have been a "staff" reproduction of the Parthenon, and the classic element evidently ruled in the exhibition buildings generally.

To the *Gentleman's Magazine* Mr. Percy Fitzgerald contributes an article, under the title "What is the Scene?" the tendency of which is exactly the reverse of Professor Herkomer's recent teaching in regard to stage effect. Mr. Fitzgerald urges that "the scene" is only the centre of interest on the stage, and not a space bounded by realistic walls with "practicable" doors, and that a great deal of money expended on modern realism of effect is money thrown away. We can only agree with Mr. Fitzgerald so far as this—that there is a great temptation at present to make elaborate scenic effect a cloak for poor acting. If the acting is carried to the highest point of excellence, the scenic refinement can only be a help and not a hindrance; and when Mr. Fitzgerald suggests that historical accuracy of costume is of no consequence he is stating a theory that can only lead us back to Julius Cæsar or Macbeth "in Spanish habits."

The *Cornhill* contains an appreciative and well-written article on Brunel by Mr. Acworth, who has done so much to popularise a knowledge of railways and their working. In regard to Brunel's longitudinal sleepers for the rails Mr. Acworth suggests that his system was the best commercially, at the time, for producing a strong road in an economical manner, though it would not be the best now; and there may be something in that view. He mentions one fact which, as he implies, is probably known to few people, viz.: that "every single over-bridge on the Liverpool and Manchester Railway has had to be removed and rebuilt, because George Stephenson only left 4 ft. between the two lines of rails, whereas modern practice enforces 6 ft. as a minimum."

Macmillan contains a somewhat sarcastic article, not uncalled for, on "The Craze of the Coloured Print," referring to the conventionally coloured lithographs of the subjects of Cipriani, Cosway, Angelica Kaufmann, &c., which at present enjoy a market value far beyond any that their artistic value could justify.

The *Pall Mall Magazine* contains an illustrated article on "American Express Locomotives," by Mr. Angus Sinclair. "Cawdor Castle" and "Capetown" are the subjects of two illustrated articles.

The *House* includes illustrative sketches of the old furniture sold at Hengrave Hall last month, and some sketches of the loving cups of the City Companies.

THE TRADES-UNION CONGRESS.

THE thirtieth annual Congress of the Trades-Unions of the United Kingdom assembled on Monday at the Central Hall, Birmingham, when Mr. J. V. Stevens was elected President.

The Parliamentary Committee, in their report, stated that since the Congress in Edinburgh many things had occurred in regard to industrial legislation which were of the greatest import to the Labour movement of the country. They had not only had new and startling legislation of quite a novel and experimental character introduced by the Government of the day, dealing with subjects which were of the deepest concern to the Congress and to the working classes generally, but they had also had placed upon the existing Labour laws by the judges interpretations and constructions which endangered the position of the trade union movement. . . . . With regard to the defeat during the session of the Miners' Eight Hours' Bill, the Committee were of opinion that this result was a serious blow at the general policy of the Congress in respect to a legislative eight hours' day, and they wished to point out as forcibly as they could to all the trade unions of the country, and to the Congress itself, that if they desired the general policy of the Congress to be practically effective they would have to use greater diligence in giving effect to that policy, and in the various constituencies of the country they would have to return to the Imperial Parliament men who were in sympathy with their views. At the commencement of last session of Parliament the Committee on the "Fair Wages Resolution of 1891" was again reappointed. . . . . In this connexion there were two points of special interest to the Congress in reference to Government contracts. The Committee recommended: 1st, "That in future the Government shall be responsible for all Government contractors in so far as they are under obligation to carry out the 'Fair Wages Resolution of 1891';" and 2nd, "That all contracts for Government work shall be presented to Parliament and made public." It would be remembered that for a long time now the Congress had been urging upon the Government the adoption of these two principles, which, if carried out, would no doubt be of immense advantage to the trades interested, and would tend to purify the administration of Government work. Early in the year the Committee were approached on the subject of workmen's trains, and they at once put themselves in communication with all the railway companies, and asked them if they would grant the workmen certain facilities, chiefly in reference to running trains on their different lines until eight o'clock in the morning at reduced rates. Since then several of the companies had granted concessions, and as the result of a joint meeting between the London members of Parliament and those interested in the workmen's train movement, it was hoped that the various railway companies would shortly be able to meet the wishes of the working-class community, who were chiefly affected. . . . With regard to the proposed International Trades-Union Congress (1898), the Committee, acting upon instructions from the Edinburgh Congress, at once put themselves into communication, by circular, with the trades, and since then had again reminded them of the resolution. Up to the present about one hundred replies had been received, a fairly large majority of which were in favour of holding such a Congress. . . . The Government Compensation Bill, although in many respects a useful measure, so far as the providing of compensation was concerned, in the opinion of the Committee scarcely touched the question of employers' liability in the sense in which it had always been understood in the past by the working classes. The Government had stated, and frequently repeated during the debates in the House, that this Bill introduced for the first time in our industrial legislation a new and novel principle, which was purely of an experimental character; that there was no attempt at finality; that it was not based either on the principle of logic or justice; but that if this partial attempt to provide compensation for accidents succeeded, this legislation could be further extended in years to come. The principal advantages of this Act, in the opinion of the Committee, were

1. It makes employers of labour responsible for the payment of compensation.
2. Although it permits contracting out of its provisions, it at the same time lays down the condition on which such contract can only be effected, viz., that the employer must pay a sum of money at least equal to that which is provided in the Bill.
3. That the criminal responsibility of the employer is not in any way relaxed under the Employers' Liability Act of 1880 by any provision made in this Bill.
4. It creates a new mode of procedure for the settlement of all disputes in reference to compensation, viz., the appointment of Joint Committees of Workmen and Employers, and also the establishment of Courts of Arbitration.

The principal disadvantages of this measure were:—

1. There is no compensation provided in cases of disablement until the third week from the time of accident.
2. The total exclusion from its provisions of many of the most important trades in the country.
3. It allows the objectionable principle of "contracting out" of its provisions.
4. It contains, entirely at the instigation of the House of Lords, with the approval of the Government, the obnoxious doctrine of "Contributory Negligence."

This, in the opinion of the Committee, would lead to friction and litigation. The Bill having now become law, the Committee strongly urged upon the Congress and upon the individual trades of the country the necessity of carefully watching the operation of this important Act of Parliament with a view of remedying its imperfections, and relaxing no effort until the question of employers' liability to their workmen and the criminal and civil responsibility of employers of labour was based on a sound and satisfactory footing.

The President's Address.

Mr. Stevens, in the course of his Presidential address, said that, since the Congress last visited the Midland city, in 1869, much progress had been made, alike in national and in local matters, for the well-being of the workers. Factory and Workshops, Employers' Liability, Trade Union, Public Health, and Railway Servants (Hours of Labour) Acts had been passed and all these reforms and concessions were largely due to the work of that Congress and to the trade unions throughout the country. He rejoiced to know that they had the powers conferred by these reforms, and he had every confidence that the time was not far distant when they would use them to the great advantage of the workers, without injury to the country's good. In regard to the present strike of engineers, the President said that it was certain that if the struggle was prolonged the engineers would have to appeal throughout the country to their fellow trade unionists for help. That help must be given, as under no circumstances could they allow the engineers to be defeated. It was a clumsy, out-of-date way to finance labour struggles. A better way must be found. They saw springing up trade federations, and the federation of kindred trades, and he hoped that in the near future these would be the forerunners of a grand federation of all trades throughout the United Kingdom, which would create a pool to which all might contribute, and into which all who contributed should have a right to dip in times of need, not as a charity, but as a right. With regard to the legislation of the past year, the Workmen's Compensation Act could only be regarded as a half measure. It could not be accepted as a settlement of that very important question.

A vote of thanks was accorded to Mr. Stevens for his address.

Proposed International Congress.

A motion sympathising with the engineers in the present dispute having been agreed to, the delegates proceeded with the discussion of the Parliamentary Committee's report. Mr. Sam Woods, M.P., said that as an outcome of the House of Commons Committee on the "Fair Wages" resolution, there was a recommendation that in the future the contractors should be responsible to the Government for carrying out its terms. With regard to the proposal for an International Trades-Union Congress next year, the Committee had made the necessary inquiries, with the result that replies had been received from thirty-five trades. Of these, twenty-four, representing 251,683 members, were in favour of holding Congress, while eleven trades, representing 245,782 members, were against it. As a rule, the larger trades were opposed to the holding of the Congress, while the smaller trades were in favour of the meeting.

Contracts and Fair Wages.

Mr. Knight (Newcastle) moved a resolution condemning the Government for not carrying out the terms of the "Fair Wages" resolution of the House of Commons. Mr. Gibbs (London) seconded the resolution, which was carried.

General Eight Hours' Day.

Mr. William Thorne (London) moved a resolution in favour of the limitation by law of the hours of labour to eight per day in all trades and occupations in the United Kingdom, and instructing the Parliamentary Committee to draft a Bill on the lines of the resolution. Mr. Mitchell (Glasgow) seconded the resolution, which was carried by 923,000 to 141,000.

The Congress soon after adjourned.

ST. GEORGE'S CHURCH, GATESHEAD.—On the 2nd inst. the district church of St. George, in the parish of Christ Church, Gateshead, was consecrated by Bishop Sandford. The building has been built from the designs of Mr. Stephen Piper, of Newcastle, is capable of accommodating 624 persons, and is situated at the top of Durham-road. The building has cost, with the tower, 6,400*l*. In the tower there is a peal of eight tubular bells, which have been supplied by Messrs. Walker & Coxon, of Newcastle. The reredos was designed and executed by Mr. Ralph Hedley, of Newcastle. The contractor for the church was Mr. Alexander Pringle, Gateshead. The glazing has been done by the Gateshead Stained Glass Co., and the heating by Messrs. Dinning and Cooke, of Newcastle.

Correspondence.

To the Editor of THE BUILDER.

A DISCLAIMER.

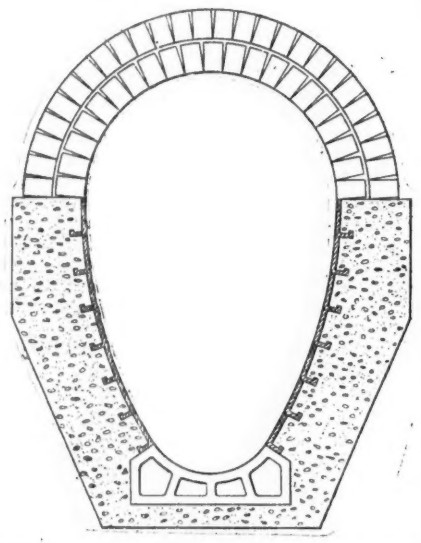
SIR,—In your issue of August 28 you refer to us (on page 165) as being the architects of a house in the suburb of Carrington.

As we are not desirous of taking the credit for work we have not carried out, we write to inform you that the house referred to was designed and carried out under the superintendence of the late Mr. Statham. BREWILL & BAILY.

GLAZED TILE SEWERS.

SIR,—It may be interesting to your readers to learn that Germany is not the only place in which concrete sewers with glazed tile surfaces have been constructed.

In 1894 I constructed about a mile of the sewer shown in the drawing herewith. This has proved to be extremely durable, and has to-day as bright and clean a surface as when first laid, an advantage over the form of the German tiles being that the upright sides of the sewer can be constructed without any form of framing, which cannot be done with the German tile, or with the tile originally shown in Messrs. Doulton's list, and patented by them many years ago.



I would add that my tile was designed not for sewer construction, but for the purpose of erecting a concrete wall without any timber framing, and I have constructed a considerable quantity of concrete walls, with some five acres of glazed face, at a cost of 30 per cent. less than brick walls could be built with glazed surface.

The sewer shown cost me about 7s. per yard run less than it would have done had it been constructed in ordinary porous brickwork, and I have built all manholes, flushing-tanks, &c., in the same material.

J. W. COCKRILL,
Borough Surveyor, Great Yarmouth.

EFFECT OF TEAK ON IRON.

SIR,—Will Mr. R. Phillips kindly give some further information as to the injurious effect of teak on iron?

Gwilt says, "Its oily properties render it less injurious to iron than oak."

Tredgold says, "It is rather of an oily nature, therefore does not injure iron."

The article on teak in Chambers' Encyclopædia says, "It is usually said to contain an aromatic essential oil which *prevents* iron in contact with it from becoming *rusted*, and *for this reason* it is always used for the backing to the armour plates of ships of war. A sticky elastic extract, to some extent resembling india-rubber, is obtained from teak, which is the real cause of the wood preventing iron from rusting."

All these authorities seem to be against Mr. Phillips' experience, and my own experience of work executed fifteen years ago is quite the reverse of Mr. Phillips'. J. H. MARTINDALE.

USE OF SLATES IN LONDON.

SIR,—In Tegg's "Chronology, or the Historian's Companion," published in the year 1815, is the following:—"London.—Houses of timber, thatched with straw, but to prevent fire ordered to be built of stone and covered with slates; but the order not observed." Further on it says:—"Alderman first appointed, 1242; the houses still thatched with straw." JOHN SHENTON.

REREDOS, MOULSOE, BUCKS.—A new reredos has just been dedicated at Moulsoe Church. It has been erected from designs by Mr. Swinfen Harris, architect, and was carried out by Messrs. Burlison & Grylls, and Mr. Hitch.

The Student's Column.

QUANTITIES AND QUANTITY-TAKING.

CHAPTER VIII.—MODES OF MEASUREMENT.

Carpenters' Work.

THERE is one point to be observed in the measurement of carpenters' work, and that is, that in measuring the lengths, every allowance must be made for the extra length required for the tenons and scarfings in constructional work. This is a matter of some moment, as in the case of large timbers this amounts to a considerable proportion of the whole. The proportions for scarfings generally may be considered to be three times the depth of the timber in every 20 ft. length. Thus for a 9 in. by 4 in. purlin the allowance would be 2 ft. 3 in. Some surveyors number the extra labour involved in this, and if there is any special wedging or cutting it is advisable to do this, but in the event of small timbers, which are merely halved, it is hardly necessary, as the term framed will probably cover any such labour, the proportion of "framing" in the event of lengths requiring scarfing being proportionately small for the total cube quantity of timber.

It is generally usual to Bill the items of "Use and Waste," first. Therefore, the first items that appear in the carpenter's bill are centering, horsing, &c.

Centering, &c.

Centering for concrete floors, per square superficial.—The system of measuring this item was fully described in Chapter III.

Centering to vaulting, per square superficial.—Take the surface of the soffit of the vaulting. Mitres and groin points are measured at *per foot run*, "including waste," as are also raking cuttings.

Centering to apertures, arches, &c., per foot superficial when not less than 9 in. wide on soffit stating the shape, *i.e.*, whether flat, segmental, semicircular, elliptical, or otherwise. If less than 9 in. wide on soffit, measure at *per foot run. Note.*—That if the soffit of an arch is in more than one plane a separate centre must be taken for each. Keep centering to gauged arches separate, as these require to be planed on the back on account of the finer finish of the soffit of the arch.

Turning pieces, per foot run.—Take these to flat or slightly curved arches when less than 9 in. wide on soffit.

Centering to trimmer arches, per foot superficial.—These are sometimes required to be left in. If so, state this. In this case it will not be necessary to take the item of "filleting soffits of trimmer arches" hereafter described, as the centre is fixed so that the underside may be lathed to carry through the ceiling under same.

Centres to Bulls' Eyes.—Number these, giving the diameter and the widths of soffits. This is sometimes done in the case of semicircular centres, some surveyors going so far as to number the whole of the centres.

Notches in Centering.—Number any notches required in centering for key blocks, &c.

Horsing and Strutting Stone Lintols.—Number these, giving the lengths these are "averaged" by the abstractor.

Constructional Work.

Fir in Plates, per foot cube.—6 in. to be allowed in every 20 ft. running length for laps. *Note.*—That if the building is hipped, cross ties and dragon pieces will be required at the angles.

Circular plates should be measured at *per foot run* stating the radius.

Fir in Lintols, per foot cube.—These are frequently billed with the lintols, and the item then appears as "fir in plates and lintols."

Fir in Ground Joists and Sleepers, per foot cube.—These to be kept separate from the other joists.

Fir in Floors, per foot cube.—Describe this work as "*framed*," and take the deductions and additions for trimmings, and include with the cube quantity, allowing in the lengths for the tenons, this being practically the whole of the "framing" required. Take here any iron, stone, or brick corbels required to carry ends of joists next flues. The ends of joists are built in, therefore an item of cutting and pinning is not required.

Fir in Partitions, per foot cube.—Describe this work as "framed," keeping that in *trussed* partitions separate. The enterties being in short pieces are frequently measured at *per foot run.*

Fir in Roofs, per foot cube.—Describe this work as framed, keeping that in *trusses* separate. It is also advisable to give an item of "Hoisting trusses," describing as "King post truss," "Queen post," &c., as the case may be, with the span and rise and the height they have to be raised. Allow for trimmings as described to floor joists.

General Note.—In addition to the allowances for "scarfings," previously mentioned, it must be borne in mind that if the lengths of rafters, joists, &c., are over 25 ft. long, allowances must be made for "passings." If, however, it is necessary for these to be in one length, the item must be kept separate and the length stated. This also applies in the case of timbers of any exceptional size.

Timbers less than 2 in. thick and over 4 in. wide to be measured at *per foot superficial*, but if less than 4 in. wide and 2½ in. thick at *per foot run.* The latter is sometimes kept at per foot cube in "small scantlings," but the former method is preferable.

If timbers are to be of the sizes specified, *i.e.*, without any reduction in size for saw cuts and planing, this fact should be stated in the heading. This will also apply to the thicknesses of boarding.

Labours on Timbers.

Planing, per foot superficial.—This should be all measured and not included with the item of timber. The latter is a slipshod method sometimes adopted to save time and trouble, but gives the contractor very little idea as to the quantity of planing required.

Circular Cutting, per foot superficial, if over 6 in. wide; if under, at *per foot run.* State whether "rough" or "wrot."

Splays and Chamfers, per foot superficial, if over 6 in. wide; if under, at *per foot run.*—State whether "rough" or "wrot," *number* stops (those to the running items following the item, the others "averaged" and following the superficial dimension). State whether splayed or moulded, and if the latter give a sketch if in any degree elaborate. The stops to include the extra labour working up to stop. Keep circular work separate, and state whether to "flat" or "quick" sweep.

Mouldings are measured as last described.

Sinkings, number these, giving size, shape, depth, and the finish around the edges, giving the widths or girths of the chamfer, or molding to edges.

The following items are also to be billed as *numbers:* Cutting and shaping finial posts and neckings, caps, &c., to same. If the finials are small, number same complete with necking, caps, &c., giving sketch. Fixing bolts, straps, &c., averaging the lengths. Letting in and pelletting bolt-heads. Short wrot ends to timbers, giving sizes and lengths. If shaped, give sketch.

Coverings, &c.

Battening for Tiling, Slating, &c., per square superficial.—State size of battens and what it is for (to enable builder to judge of spacing), and if for weather tiling keep separate, and state if plugged to brickwork.

Wall Battening, per square superficial.—State size of battens and the spacing, and if plugged to brickwork.

Roof Boarding, per square superficial.—State thickness and whether "rough" or "wrot."

Boarding for Lead or Zinc Flats, &c., per square superficial.—State thickness and describe as "traversed for lead." If with firrings include with the item, if of ordinary depth. If firrings are extra deep, as in the case of the upper end of a large flat, it is advisable to take these separate up to the *lower level* at drip, still describing the boarding as "including firrings." Dormer tops and other small items are measured at *per foot superficial*, and described as "in dormer tops."

Boarding to Cheeks of Dormers, &c., per foot superficial.—If for lead describe as "traversed for lead," and if in spandrils measure these net, stating this in the item. If very small these may be *numbered.*

Weather Boarding, per square superficial.—State *average* thickness, or mention the thickness of *both* edges and the lap, and describe as "measured net as seen."

Cuttings, &c, on Foregoing Battening and Boarding.—For all raking ruttings and to hips, valleys, &c., allow the length of the cutting by 3 in. on each side, and add to the bulk of the boarding, &c., and describe as including all cutting, or take an item *per foot run* of "Raking, Cutting, and Waste." Take splayed edges to boarding at *per foot run.* Keep *circular batten-*

ing and boarding separate from the remainder, stating the radius, if to conical roof the radius at eaves.

Valley and Lier Boards, per foot superficial.—If the roofs are battened for tiling or slating, valley and lear boards will be necessary for lead valleys, and the turn-ups of lead from gutters. State thickness, and include the splayed edges and *deduct* the surface from the battening.

Gutter Boards, per foot superficial if over 6 in. wide; if under this width, at *per foot run.* State thickness of boards and size of bearers, whether the items include bearers, and if so, whether these are framed.

Gutter Sides, per foot superficial, if over 4 in. wide; if under this width, at *per foot run.* State thickness, and if edge cut to slope of gutter.

Felting to Roofs, per square superficial.—Give full description, how nailed, and the width of laps; measure this *as seen,* and describe the item as such, the builder making his allowance for laps. It is usual to allow the same for raking, cutting, and waste as described to boarding, &c.

Grooves, Rebates, &c., per foot run.—If over 2 in. girt, state the girt, and also if "stopped."

Fixing Pieces, per foot run.—Measure these the width of jambs for fixing joiners' work. These are frequently *numbered,* giving the sizes.

Tilting Fillets, per foot run.—No size need be given for these unless exceptionally large.

Eaves Boards, per foot run.—State thickness, and if feather-edged state this also, and also if "wrot."

Feather-edged Springing Pieces, per foot run.—These to be taken on the side of trimmer joists as skewbacks for trimmer arches.

Secret Gutters.—It is not often necessary to measure this as a separate item, unless the roof is battened only. Even in this case an extra rafter and a tilting fillet will generally cover anything to this item.

Drips, per foot run, unless in gutters less than 12 in. wide; in the latter case, they should be *numbered* as "short drips in gutters." The depth should be stated and also whether rebated, cross-rebated, or rounded.

Rolls, per foot run.—State size and whether for lead or zinc; if the former they must be rounded, and if the latter double splayed. State if "bird's-mouthed to hips" or ridges. *Number* mitres, stating, if more than an ordinary mitre, whether "3 way" or "4 way," or otherwise as the case may be.

Eaves Fascias, per foot run.—State thickness and describe whether rough or wrought, and include with the item mouldings, splays, grooves, &c. *Number* mitres, &c.

Eaves Soffits, per foot run.—Measure as last described. If over 6 in. wide this item can be measured at *per foot superficial,* taking the labours separately.

Herring-bone Strutting, per foot run.—Measure the extreme length, including the joists, state size of strutting, and the depth of joists, and describe as "double." If *solid strutting* is required state thickness of strutting and the depth of the joists.

The following items should be billed as numbers:—Gusset pieces to gutters, stating size. Cesspools, stating size and depth, and, if extra over gutters, mention this in item. Short sprocket pieces, state size and length, and, if cut, the character of the cutting (a sketch is frequently advisable with this item). Felt pads to rolled joists. Filleting soffits of trimmer arches for lathing to, &c. Also any small labours to notchings, cuttings, scribings, &c.

Half Timber Work, Gables, Finishing to Dormers, &c.

Half Timber Work.—Although this work is frequently in large timbers, it is advisable to measure this at *per foot run,* including with the items the labour to faces and edges, such as grooves, &c., and describe as "framed," and, if pinned, state this also, and if pins left projecting. If "sham" half timber work, describe whether plugged to brickwork or fixed to studding, and how fixed. *Circular and shaped* pieces are frequently better *numbered,* giving the full sizes and description of labour, &c.

Beams in Half Timber Work, per foot run.—Measure these, including the ordinary labour to moulding, &c., but, if *cambered,* measure the labour to cutting to camber separately, and also the moulding, &c., on cambered edge.

Barge Boards, per foot run, including all labours to moulding, &c. Take any "planted" mouldings separate. *Number* mitres, &c., and returned ends at feet, and if shaped or made out to curve, give sketch. State how barge boards fixed, *number* housed ends of timbers to same, and measure bolts (if any).

Cornices, per foot run.—State size and girth of moulding. If "sprung," state this, and give width (on slope) and the thickness of material cornice is cut from, and also the girt of moulding and the edges, if splayed, grooved, &c., and if including blockings. *Number* mitres, ends, &c.

Dentils, per foot run.—State if worked on solid or planted on, and give size (three dimensions) and distance apart, state if in undercut moulding, and if dentils themselves are moulded. A sketch is frequently necessary in this item.

Brackets, Corbels, &c.—*Number* these, giving full description, sizes of timber, &c., the labour, girt of mouldings, &c., and how fixed.

Carving.—The same remarks apply to this as to "Carving in Stone."

External carpenter's work is frequently put together in white lead. If this is the case incorporate with the heading, and also state whether secret fired, and if copper or brass screws are to be used. It is generally advisable to keep all external finishings under a separate heading, giving these particulars and any others that may be necessary to enable the contractor to arrive at a fair idea as to the quantity of the labour involved. Some surveyors put these items in the joiner's bill, and it is sometimes somewhat difficult to draw an exact distinction, but this is of little moment providing the descriptions are thoroughly self-explanatory.

Slaters' Work.

It should have been stated that the system of measuring slating described does not apply to *Westmoreland slating,* which is laid in diminishing courses from eaves to ridge, which fact, as well as a full description of the slates, &c., should be stated.

The allowances for cuttings, &c., to *Westmoreland slating* generally accepted are as follows:—*Eaves* by 1 ft. 6 in.; *hips and valleys* by 9 in. for each side; *dormers, chimneys, &c.,* by 9 in. down each side in addition to the allowance for eaves at top; *verges and ends of roof next gables* by 3 in.

GENERAL BUILDING NEWS.

CENTRAL HIGHER GRADE SCHOOL, BOLTON.—The new Central Higher Grade School, in Great Moor-street, has just been opened by Sir George Kekewich, K.C.B. The architect was Mr. R. K. Freeman, whose designs were, as the result of competition, placed first by the assessor, Mr. Robson, Architect to the Education Department. The building provides accommodation for 1,080 children. The main entrance is in Great Moor-street, the boys and girls' entrances being at opposite ends of the building and approached from their respective playgrounds. Features of the design are the central halls, which measure 96 ft. by 32 ft., and are carried up the full height of the building, the basement floor being used as a gymnasium and the top floor as a chemical laboratory. On the ground and first floors, which are devoted to class-rooms, these central halls are used as assembly halls, all the class-rooms opening out of them and being separated from them by glazed screens. In the basement the light is obtained by means of sunk areas, of which those at the ends of the building will be faced with glazed bricks, and are also excavated to the level of the basement floor. In the basement are also provided a physical lecture-room, with stepped gallery, physical laboratory, manual instruction-room, kitchen, and dining-room, heating-chamber, and the necessary store-rooms. From the book-store, which can also be approached from the outside, a lift is carried up the entire height of the building. Three staircases have been provided, those for boys and girls being near their respective entrances, while a central one has also been provided near the main entrance. On the ground and first-floors, which are similar in arrangement, are provided seven class-rooms on each floor, all opening off the central hall, and each providing accommodation for sixty scholars. On the ground floor, near the main entrance, has been placed the head-master's room, while the corresponding room on the first floor will be used as a managers' room for meetings, &c. On the top floor the central hall is to be utilised as a chemical laboratory; and a chemical lecture room, with gallery, laboratory, chemical store room, preparation room, dark room, &c., is also provided on this floor. The front portion of the building on this story will be used for the teaching of drawing, and separate rooms are provided for each branch, with a room for the art master. In the respective playgrounds, but at some distance from the main buildings, will be placed the boys and girls' latrines, and also the covered playgrounds. A caretaker's house, having a large cookery school with scullery and stores over it, is provided in a separate building facing Johnson-street. The external design of the school is Renaissance. The building rises to a height of 64 ft. to the ridge. The central gable over the main entrance is surmounted by a turret with ornamental weather vane, and the roofs are covered with blue Welsh slates. The bricks used throughout the building, with the exception of the glazed bricks, are of local manufacture, while the terra cotta for all dressings has been supplied by Messrs. Dennis & Son, of Ruabon. The general contractors for the work are Messrs. E. & D. Maginnis, their sub-contractors being Messrs. Gornall & Son, for the brickwork; Mr. Wm. Pollitt, for the excavating, concreting, and draining; Messrs. Vause & Sons, for plumbing and glazing; Messrs. Gregsons & Smith, for mason work; Mr. A. Warburton, for plastering, painting, &c.; Mr. Wm. Altham, for slating; and the gas-fitting in some parts of the building by Messrs. Vause & Sons; the heating of the building has been entrusted to Messrs. Marsden & Co.; the rolled steel girders have been supplied by Messrs. Thomas Walmsley & Sons. The new building is to be lighted throughout by electric light, this part of the work having been entrusted to Messrs. George Hill & Co., of Manchester. Mr. David Walch has acted as clerk of works. The total cost, including the site, is 32,500*l.*

HOME FOR AGED MINERS, RYTON.—On the 28th ult. the foundation stone was laid, at Ryton, of a block of buildings which are to be known as "The Robert Simpson Memorial Homes for Aged Miners." The site abuts on the main turnpike from Newcastle to Hexham, and is situated at a place known as Barmoor. The homes, which will have a south aspect, consist of eight one-story homes and two two-story homes, one of each of the latter being placed at the two ends of the block. Each of the eight homes will consist of two rooms; the two end homes will have three rooms each. The block will be built of white bricks, with red brick ornamentation, and the roof will be of Bridgewater red tiles. The homes have been designed by Mr. Jas. Archbold, engineer to the Stella Coal Company, and will be built by Mr. Peter Fellowes, Greenside.

BANK AT BRINSCALL, CHORLEY, LANCASHIRE.—New bank premises have just been erected in Railway-road, Brinscall, by the Williams Deacon and the Manchester and Salford Bank, Limited. The building is two-storied, and has frontages to Railway-road, and a street running at right angles therefrom. The exterior is faced with Yorkshire stone. The windows are of cathedral glass, supplied by Messrs. Seward & Co., Lancaster. All the rooms are fitted with hot-water heating apparatus by Messrs. Holt & Co., Chorley. The building has been erected from the designs of Mr. W. H. Dinsley, architect, Chorley. The contractor is Mr. J. Leigh, of Brinscall.

CATHOLIC CHURCH, DARRARAH, CLONAKILTY, CORK.—The new church at Darrarah, in the Parish of Clonakilty, was dedicated on the 29th ult. by the Rev. Dr. Kelly, Bishop of Ross. The church is in the Early Gothic style, built of local stone, with white limestone dressings. It consists of a nave and aisles, chancel and side chapel, the latter being a mortuary chapel for, and having underneath, the family vault of the donor. Opposite this chapel is the sacristy. The nave is separated from the aisles by arcades of five pointed arches on either sides, carried on Aberdeen granite polished shafts, with moulded caps and bases, and is lighted by a rose window at the west end and ten cinque-foil windows in the clerestory. The aisles have lancet windows, and the chancel is furnished with two lancet windows, surmounted by a small rose window, these being filled with stained glass by Messrs. Mayer & Co., Munich. The roofs are of open construction in pitch pine, varnished, and the floors of nave and aisles tiled, with pitch pine flooring under the seats, the chancel being tiled with encaustic tiling. The entrance is by a large porch at the west end of nave, and the west gable is crowned by a stone belfry. The Communion rails are in ornamental wrought-iron work, by Messrs. M'Gloughlin, Limited, of Dublin; the high altar in Caen stone and marble, with crocketed canopy and foliated panels, is by Mr. O'Connell, of Cork. The builder was Mr. John Sisk, Cork, the architect being Mr. G. G. Ashlin, of Dublin.

NEW MILITARY HOSPITAL, EDINBURGH CASTLE.—Several old buildings are being removed at the Castle, Edinburgh, to make room for a military hospital. The new Military Hospital will have architectural features of a Scottish character which the old buildings did not possess. The ground plan covers an area of 160 ft. by 120 ft. The block, which will face Princes-street, will be three stories in height; and towards Castle-terrace, there will be an annexe of the same height, the wall of a promenade, and the gable of the south block, which will only be of two stories. On the east side will be the kitchen and entrance gateway. To Princes-street a prominent architectural feature of the building is a range of dormer windows deeply set in the wall-head, and rising considerably over it. From the apex of the stone gablet to the foot of the window the measurement is 15 ft. The wall-head between shows a corbelled cornice with embrasures, and round the dormers is carried an ornamental string course. The windows of the lower stories are square-headed, with jambs of dressed stones. Between the building and its annexe, which faces Castle-terrace, the façade is broken by a large recess. The whole of the buildings will be of stone

The gable of the south block has bold crow-steps, and the windows show varied features. On the ground floor of the Princes-street block will be a ward with fourteen beds. There will be a lobby with entrance from a courtyard, round which the buildings will be grouped. This will lead to a waiting-room, which in turn will communicate with the surgery. The other accommodation at this level is set apart as pack and linen stores. A stone staircase, which is shown in the elevation as a projection, will give access to the floors above. On the first floor there will be a sixteen-bed ward, a day room, and three small wards, with the usual rooms for orderlies. The floor above in its internal arrangements corresponds to a large extent with that just described. There will be a sixteen-bed ward, and one of three other small wards will be set apart for officers. In it there will be two beds. From this block a corridor runs southwards, at the end of which a completely new kitchen establishment for the hospital is to be constructed. The kitchen will only be one story in height, and will be lighted from the top as well as the sides. In the south block, on the ground floor, is a ward of five beds for special infectious cases, with separate entrance and sanitary arrangements, so as to isolate it from the rest of the building. There will be rooms for the orderlies, and stores, on the ground level, and in the floor above will be the quarters for the warrant officer. The beds in the wards are placed two between each window. The wards will be heated by hot-water pipes and by special stoves. Between the two blocks on the west side a raised promenade will be constructed overlooking Castle-terrace, on which the patients may take the air. It is approached from the courtyard by a double flight of steps, and between the pillars carrying it there will be seats placed for the patients. The hospital buildings on the Castle side are enclosed by a wall, and for entrance the old Queen Anne pillars will be used. They are to be taken down, and put up in another position from that which they now occupy. The courtyard has been formed by removing the old magazine building, which was 74 ft. by 41 ft., and part of the space thus secured will be laid out as an ornamental ground. The cost of the hospital will be about £18,000. The plans were designed in the War Office, and have been adapted locally by District Surveyor T. Ivor Moore, R.E. The specifications were prepared locally under Colonel W. H. Patten, commanding the Royal Engineers in Scotland, and the District Surveyor.

RENOVATION OF MADDERTY PARISH CHURCH, N.B.—This church has just been reopened, after having been renovated. A new entrance upon the north side, with porch facing west, takes the place of the two openings now built up, and the old square-sashed windows have been superseded by stone mullioned and arch-headed openings of two and three lights; while new windows have been pierced on the north and east walls, and a little rose window has been introduced in the west gable. The entrance has been changed from the west gable to the centre of the north wall of the church. The gallery in the interior has been taken away, and the church enlarged by utilising the space formerly occupied by the old lobby and staircases. The pulpit, with its new carved panels, is placed in the north-east corner on a raised and tiled platform, on which also the choir is to be accommodated. Three stained glass windows have been put in, while all the other windows have been filled in with cathedral tinted glass. The glasswork of the windows has been executed by Messrs. Ballantyne & Gardiner, Edinburgh. The contractors for the various departments of the work were: Messrs. D. Buchan, mason; W. Drummond & Sons, joiners; James Tainsh, plasterer; and T. & J. Phillips, slaters—all of Crieff. The heating engineers were Messrs. M'Cormack & Sons, Glasgow. The whole works have been carried out from designs and under the superintendence of Mr. G. T. Ewing, architect, Crieff.

WORKHOUSE INFIRMARY, SELLY OAK, WORCESTER.—The formal opening of this new Infirmary has just taken place. The infirmary, the foundation-stone of which was laid in August, 1895, is situated on elevated ground adjoining the workhouse. The land slopes from east to west about 11 ft., an inclination which has been taken advantage of in the planning of the pavilions, of which there are four, with sufficient space for an extension of another four. The administrative department is in the centre, with the laundry, boiler-house, engine-house, dynamo-rooms, and water-tower at the rear, the whole covering an area of about six acres. The buildings have been erected by Mr. Thomas Rowbotham, Small Heath, from the designs of Mr. Daniel Arkell. Externally the buildings are of red brick, relieved by dark red coloured brick and terra-cotta strings, the roofs being covered with bright red Broseley tiles. The style is a free treatment of Renaissance. Accommodation is provided for about 300 beds for patients and officials, whilst provision has been made for a future extension of a similar number. In the centre are the one-story kitchen block and administrative buildings, which are connected to the building by covered ways. The doctors' room, nurses' general sitting-room, sewing-rooms, matron's rooms, steward's stores, dispensary, telephone exchange room, and nurses' and servants' residences are in the centre and under the supervision of the matron, with lavatories, bath rooms, &c. The cooking kitchen sculleries, pantries, stores, &c., are at the rear of the administrative block, centrally placed, and easy of access from the male or female portion of the block. Adjoining the central or administration block, and off the main corridor, are placed the receiving wards for male and female patients. The pavilions are axially arranged nearly north and south, with fire and sound proof floors. There is no direct internal communication between them, the upper floors being reached by an external staircase, opening from the staircase. A corridor leads left and right to the different rooms, which comprise eight wards for twenty-four beds each, eight wards for five beds each, and eight wards for two beds each for special cases. The large wards are overlooked from the nurses' duty rooms and kitchens by a small window. The labour wards are provided for five beds each, and two separate wards of one bed each at the end of the north female pavilion, to be used for maternity cases, these wards being cut off from the main pavilion by corridors. Two large wards are lighted by means of windows on either side; all angles and corners are rounded; and the whole of the floors are of marble mosaic. Access and egress fire-proof staircases are provided to each block, and balconies at each end of the pavilions for the use of convalescent patients. The male and female pavilions on the first floor are connected with the official block by a wide open asphalte roadway, which forms the roof of the corridor beneath. A boiler-house, engine-house, dynamo-rooms, laundries, and water tower have been built at the rear of the new building, together with three large boilers and a tank in the water tower capable of holding a sufficient supply of water. Adjoining the boiler-house is a large coal store. Near to a high chimney shaft, built to carry the smoke away from the new building, is the engine and dynamo-room, in which are placed steam engines to create the electric supply for lighting the whole of the rooms in the infirmary, and also the arc lamps to illuminate the grounds at night when necessary. No gas pipes are laid in any portion of the building. The total cost of the infirmary is estimated at from 45,000*l.* to 50,000*l.*

CONGREGATIONAL CHURCH, FOLKESTONE.—On the 1st inst, the new Congregational Church, erected at Radnor Park, Folkestone, was opened. The site is near the Central Railway Station. The new building, from designs by the late Mr. Joseph Gardner (who died soon after the laying of the memorial-stones), is in the Early Decorated style, is free from galleries, and will seat 800 persons. In the rear will be a lecture-hall 45 ft. by 25 ft., with offices in the basement. The church is faced with Kentish-rag coursed work, with Bath stone dressings, and the roofs are covered with tinted Broseley tiles. The principal porch is carried up as a tower 80 ft. high, with pinnacled parapet, and a clock with four faces, by Messrs. Gillett, of Croydon. The church is to be heated by hot air. The two central lights of the chancel windows represent the "Good Shepherd" and the "Light of the World." The cost of the new structure complete is estimated at between 6,000*l.* and 7,000*l.*

PORCH, CHURCH OF ALL HALLOWS, KEA, CORNWALL.—A new porch has just been erected at the church of All Hallows, Kea. The erection of the porch completes the external design, as originated by the architect, Mr. G. Fellowes Prynne. The work was carried out by Mr. Carkeek, of Redruth, the builder of the church.

PROPOSED HOTEL, CADOXTON, BARRY.—A new hotel is to be erected at Cadoxton, from plans prepared by Mr. H. Tudor Thornley, architect, Cardiff.

AN ALHAMBRA FOR BLACKPOOL.—The new buildings on the site of the Prince of Wales Theatre at Blackpool, which are to be erected for the Alhambra (Blackpool), Limited, from the designs of Messrs. Wylson and Long, architects, of London, will be started immediately. The site is in the Promenade next to the Tower-buildings. Included in the scheme are a theatre of varieties, circus, restaurant, and ball room. The tender of Messrs. Whitehead, of Blackpool, has been accepted for the erection of the general building work, furnishing, and decorations, at a cost of 76,200*l.*, and that of Mr. Samuel Butler, of Leeds, for the constructional ironwork, at a cost of 12,788*l.*

CHILDREN'S WARD, ISLE OF WIGHT INFIRMARY AND COUNTY HOSPITAL, RYDE.—Princess Henry of Battenberg, President of the Isle of Wight Infirmary and County Hospital, laid the foundation stone of the children's ward recently. The new building will extend due east and west at right angles to the old building. The present isolation ward will be adapted so as to work with the new, and will contain rooms for male and female patients respectively, besides rooms for the nurses. Next to this will be the children's ward, containing accommodation for ten beds. This will open by a French window to a balcony on the south side, from which steps will afford access to the grounds. It is proposed to erect a sun-room for the convalescent children at the east end of the building. The architects are Messrs. Young & Hall.

PARISH CHURCH ENLARGEMENT, MATLOCK.—On the 2nd inst. the foundation stone was laid of the new aisle and chapel to be erected at this church in commemoration of the sixtieth year of the reign of the Queen. The cost is over 1,000*l.* The architect is Mr. Percy H. Currey, of Derby, and the work is being done by local tradesmen—Mr. William Boden the masonry, Mr. W. Holmes the woodwork, and Mr. A. R. Keeling the plumbing. The accommodation will be increased by about 140.

ALTERATIONS, &C., TO PARISH CHURCH, KNUTSFORD.—The parish church of Knutsford is now being repaired and altered under the superintendence of the architects, Messrs Darbyshire & Smith. The work consists of general repair to the fabric, new staircases to the north and south galleries, and removal of the west gallery, together with a scheme of decoration.

LIBERAL CLUB, KNOTTINGLEY.—The Earl of Crewe has just opened the Liberal Club at Knottingley. The building is situated in Aire-street, opposite the Flatts. Below are two shops, while on the first floor is a reading room, 14 ft. long by 21 ft. wide. On the story above this are the billiard and reading rooms. Close by is the recreation room, and adjoining these rooms are lavatories. The architects were Messrs. Tennant and Bagley, of Pontefract.

CHURCH FOR COATBRIDGE, LANARKSHIRE.—At a special meeting of the Coatbridge Dean of Guild Court recently plans were passed for the erection of a new church for the parishioners of St. Augustine's, Coatbridge. The building, which will accommodate over 1,000 worshippers, is to be erected at the junction of Buchanan-street and Dundyvan-road, and will be in the Gothic style. It will be built of red stone from Lockerbridge Quarries, and it is estimated that it will cost over 10,000*l.* The architects are Messrs. Pugin & Pugin, London.

METHODIST CHURCH EXTENSION, BALSALL HEATH, WORCESTER.—The memorial stones of a new Methodist New Connexion Chapel were laid recently in Ombersley-road, Balsall Heath. The new building is to be Gothic in style, with a main entrance from Ombersley-road, and the plan is based on the nave and aisle model, with a small gallery over the entrance lobby, and a choir gallery and organ loft at the rear of the rostrum. When completed, the chapel will afford accommodation for close upon 500 persons. The contractor is Mr. George Webb, of Handsworth; and the architect is Mr. A. H. Goodall, of Nottingham.

CATHOLIC CHAPEL, SHIELDMUIR, LANARKSHIRE.—The foundation-stone has just been laid at Shieldmuir, near Motherwell, of the chancel arch column of the new Roman Catholic Church of St. Patrick. The church, when completed, will have a seating capacity of about 1,000. The building will consist of chancel, nave, side chapels, aisles, baptistry, sacristies, confessionals, &c., and the internal length is 125 ft., and 58 ft. in width, while the height is 58 ft. Red sandstone is being used in the construction, and the estimated cost is 6,250*l.*, the designs being by Messrs. Pugin & Pugin, London. The nave, 97 ft. long and 28 ft. wide, is divided into seven bays. The chancel, apsidal in form, is divided from the nave by a chancel arch.

NEW TOWN MISSION HALL, FALKIRK.—A new town mission hall building is to be erected for Falkirk, on a site at the top of Dundee Court. In the building there is to be a large hall and a small one, and on the upper floor a large club or reading-room. The building, which will cost about 1,200*l.*, has been designed by Mr. A. Gauld, architect, Falkirk.

PROPOSED FREE CHURCH, MACDUFF, BANFF.—It is proposed to erect a new Free Church and Hall at Macduff. Messrs. Matthews & Mackenzie, architects, Aberdeen, have prepared plans.

CHANCEL, CHRIST CHURCH, GREENHEYS, LANCASHIRE.—Another stage in the rebuilding of this church has just been reached by the completion of the chancel, and the provision of a temporary corrugated iron nave, which will be used for the seating of the congregation pending the erection over it of the larger and permanent nave. Mr. W. Cecil Hardisty is the architect of the new church. Bricks, with stone dressings, are used in the erection of the edifice, the contractors being Messrs. Statham & Whitby, of Pendleton.

MASONIC HALL, CARRICKFERGUS.—The foundation stone of a new Masonic Hall, was laid at Carrickfergus recently. The building, which will occupy a site in Victoria-street, will be 30 ft. by 48 ft., and two stories high. The ground floor will contain, according to the plan, dining-room, cloakrooms, kitchen, and serving departments, whilst on the second floor there will be lodge-rooms, billiard-room, and ante-rooms. The execution of the work has been entrusted to Mr. Ezekiel Caters, builder; Mr. S. P. Close is the architect.

SANITARY AND ENGINEERING NEWS.

EXTENSION OF PIER, WALTON-ON-THE-NAZE.—The first pile of the pier extension at Walton-on-the-Naze was driven on the 31st ult., by Mrs. Round, wife of Mr. Round, M.P. The present pier, about 600 ft. long, is to be widened, and to have an addition of 1,910 ft., as well as a new entrance, a pavilion, and electric trams. The engineers are Messrs. Kinniple & Jaffray, and the contractors, Messrs. J. Cochrane & Sons.

WATER SUPPLY WORKS, &C., ST. HELENS.—At the Town Hall, St. Helens, on the 2nd inst., Colonel W. Langton Coke, M.Inst. C.E., an inspector of the Local Government Board, opened an inquiry into the application of the St. Helens Corporation to borrow 67,328*l.* for several works which have been decided upon by the Council. The first item to be

borrowed, 20,228*l.*, is for works of water supply, viz., the erection of a new pumping station and works on the site already acquired at Melling, near Ormskirk, at an estimated cost of 17,428*l.*, and the laying of an additional 21 in. main from Portico to Brown Edge at an estimated cost of 2,800*l.* Another item is 25,000*l.* for gasworks purposes, and includes the extension of the works which was decided on some few months ago, including the reconstruction of two of the present gasholders, extension of the retort-house, new condenser and exhauster with engine, and new distributing mains. A further item of 17,000*l.* is required for the extension of the electricity works and the laying down of additional plant for the production of electric light. The next item was 2,600*l.* for works of paving, including the relaying of the following streets with granite:—Peter-street (from Raglan-street to Wilson-street), Water-street, and Barrow-street. The last item is 2,500*l.* for the conversion of the portion of the Town Hall, formerly used as a library, into offices for the Borough Treasurer, and other alterations in the Town Hall. The various items were explained to the inspector by Mr. W. J. Jeeves (the Town Clerk), and further elucidated by the officers of the Corporation, Mr. J. J. Lachland (Water Engineer), Mr. E. Ll. Morgan (Assistant Surveyor), Mr. Samuel Glover (Gas Engineer), and Mr. Robert Hammond, of London (Consulting Electrical Engineer to the Corporation).

CATRINE WATER SUPPLY, KILMARNOCK.—At a recent meeting of the Kilmarnock District Committee of the County Council, plans by Mr. Copland, C.E., for the proposed extension of Catrine water supply were submitted. Mr. Morton, Catrine, stated that the scheme was estimated to cost about 1,600*l.* The scheme was adopted, and the sub-committee instructed to proceed with it.

WATER-SUPPLY WORKS, HOLMFIRTH.—On the 2nd inst. Colonel W. Langton Coke, M.Inst.C.E., an Inspector appointed by the Local Government Board, held an inquiry at the Holmfirth District Council Room into an application by the Council for sanction to borrow 1,000*l.* for works of water supply, and for the erection of storage depôt buildings and public dustbins. There were present Mr. F. S. Whittell (Surveyor), Mr. H. Lomax (Clerk), Mr. Isaac Sykes (Sanitary Inspector), and others.

PROPOSED OVER-SEA PROMENADE, BLACKPOOL.—The authorities at Blackpool have been considering a scheme prepared by the Borough Surveyor for widening the promenade. As an alternative to this scheme, another is suggested by Mr. John Worthington. Briefly, Mr. Worthington proposes to relieve the promenade by erecting three large piers, each 600 yards long and 20 yards wide. He would erect first a large pier opposite the tower, with an entrance 100 yards wide, narrowing to 50 yards. Upon the pier will be erected shops, &c., and in every other respect the promenade space will be a free public highway. Mr. Worthington thus proposes to erect a promenade over the sea. There is to be an upper deck and a lower deck, the lower deck being made of iron grating. The whole of this promenade space will be equal to four and a half acres. At the pierhead he proposes to erect a hydro, hotel, or pavilion, and the total cost will be 14,000*l.* When the three piers are erected there will be added some thirteen and a half acres of promenading space, which is equal to the entire space of the present promenade. He also includes in it a new sewerage scheme, shelters, and public conveniences, and other advantages. He claims that with the promenade thus relieved the existing promenade can be utilised without alteration for a double line of trams.—*Manchester Evening News.*

STAINED GLASS AND DECORATION.

MEMORIAL WINDOW, BROCKMOOR CHURCH, NEAR STOURBRIDGE.—A memorial window of three lights was recently placed in the chancel of Brockmoor Church, near Stourbridge. The subject is the Crucifixion, and the work has been executed by Mr. T. W. Camm, Smethwick, near Birmingham. A circular window has also been placed above the chancel arch, with the emblem of the Divine Spirit as a central feature.

WINDOW, KING'S COLLEGE CHAPEL, ABERDEEN.—A stained-glass window, in memory of Dr. William Robertson Smith, late Professor of Arabic at Cambridge, was unveiled in King's College Chapel, Aberdeen, on the 31st ult. The four principal lights of the window contain figures of the Hebrew prophets, Isaiah, Jeremiah, Ezekiel, and Daniel. These are from pictures by Sir Edward Burne-Jones. The window was executed by Messrs. Morris & Co., of Merton Abbey. The architect was Mr. A. Marshall Mackenzie.

WINDOW, CLEEVE CHURCH, GLOUCESTERSHIRE.—The west window of this church has been filled with stained glass in commemoration of the Diamond Jubilee of Queen Victoria. The subject selected is "Christ Blessing Children," designed to occupy two panels, which are formed by an arrangement of foliated work of Early English type. In one of the bases is introduced the Royal arms, and in the other the shield of the Diocese. The window is the design and work of Messrs. Joseph Bell & Sons, of Bristol.

WINDOW, AXBRIDGE PARISH CHURCH, SOMERSETSHIRE.—A stained-glass window has been fixed in the east end of the Lady Chapel of Axbridge Church. The subjects of the window are:—The Annunciation, the Presentation, and the Adoration of the Magi. The window is the design and work of Messrs. Joseph Bell & Sons, of Bristol.

WINDOW, ST. NICHOLAS'S CHURCH, FRANCIS-STREET, DUBLIN.—A new stained-glass window has just been erected in the Churth of St. Nicholas of Myra, Francis-street, Dublin. The subject of the new window is the patron saint of the parish. The work has been carried out by Mr. John Earley, of Dublin.

FOREIGN.

FRANCE.—It is announced that M. Poilpot, the painter, is to execute for the 1900 Exhibition a grand panorama representing all the principal phases of M. Faure's visit to Russia.——We regret to announce the demolition of a very interesting old house in the Rue des Archives, built in 1687 from the designs of Mansard, and decorated with carved bas reliefs by Coysevox. The house contained also decorative paintings by Lebrun, Coypel, and La Fosse.——The building of the large exhibition palace at the Champs Elysées has been commenced. M. Thomas, who undertakes the façade facing the Avenue d'Antin, has completed his design, which will include a large portico with pilasters, between two long galleries, the ceilings of which will be supported by twelve sets of coupled columns. The edifice will be surmounted by three domes, a large one in the centre and smaller ones at the two ends. ——M. Lombard has obtained the first premium in the competition for the monument to Puget to be erected at Marseilles. He represents Puget standing on a square pedestal, holding in one hand a mallet; on the front of the pedestal is a figure of a woman in Provençal costume carrying flowers, and on the reverse side two children supporting a cartouche bearing the names of the sculptor's principal works. The monument, which is to be erected on the Place de la Bourse, will cost some 125,000 francs.——The jury in the competition opened by the municipality of Avignon for a Market Hall, has awarded the first premium to M. Gabelle, "constructeur," of Marseilles.——A considerable length of Roman road, with granite paving, has been unearthed at Fourvière, near Lyons; and some other remains, supposed to be those of a theatre.——Reims is shortly to be connected more directly with Laon by a new railway line.——The last remaining portion of the Palais de l'Industrie was demolished last week. ——The French Government is taking into consideration the provision of a palace for the sovereigns who are expected to attend the exhibition of 1900. The palaces of Compiègne, Fontainebleau, and Versailles (all which had been thought of for the occasion) have been put out of consideration on account of their distance from Paris; and it is now proposed to purchase either the Château de la Muette, or Sir Richard Wallace's former château of "Bagatelle," in the Bois de Boulogne.

MISCELLANEOUS.

BUILDING CONSTRUCTION CLASSES, HIGH (EVENING) SCHOOL, GLASGOW.—All the twenty-six elementary, and nine out of ten advanced students, who were presented in the recent Science and Art examinations, have passed the respective stages. In addition to certificates resulting therefrom, the Glasgow School Board have granted class certificates of proficiency to twenty-six elementary, ten advanced, and four honours students. The opening lecture of the new session was delivered on the 6th inst.

SALE OF PROPERTIES.—The directors of the London Joint Stock Bank, Limited, have acquired the site of St. Michael's Church, Wood-street, for the erection of new branch premises. The church—described in our "Note" of October 10 last—was closed a year ago, and the monuments and tablets were removed to St. Alban's, Wood-street. On July 21 last, by order of the Ecclesiastical Commissioners, the materials and freehold (3,700 ft. superficial) were sold at auction for 31,500*l.*—Studley Castle estate, Warwickshire: the castle was built in 1834 for Sir Francis Goodricke, Bart., and it is said an offer of 100,000*l.* was refused in 1893 for the property, which covers 2,550 acres with a rent roll of 2,534*l.* per annum. The old castle at Studley, in what is now the Home Farm, belonged to William Corbusceon, *temp.* the Conqueror; his successor, Peter, gave lands and a mill there to the Knights Templar, which passed to the Knights of St. John of Jerusalem, 1313. Peter also founded at Wicton, Worcestershire, a priory for canons regular of St. Augustine, who removed to Studley in the reign of Edward III. William de Cantilupe, of Aston, and his son re-endowed the priory, whose yearly revenue at the suppression was assessed at 125*l.* 4s. 8d.—Breadsall Priory, in the vale of the Derwent, and three miles distant from Derby, built late in the sixteenth century on the site of Holy Trinity Priory, founded *temp.* Henry III. for friars Eremite, but afterwards converted into one for Augustine friars. Edward VI. granted the property to Henry, Duke of Suffolk; it has since belonged to the Bentleys, Moseleys, Blands, and other county families. In the chancel of the parish church is a monument to Erasmus Darwin, the physiologist and poet, who passed the last three years of his life at Breadsall Priory, which he inherited from his son, and which remained in his family until Sir Francis's death in 1859.

PROPOSED QUEEN'S STATUE, BELFAST.—It is proposed to erect a statue of the Queen in Belfast. The statue will be executed in Sicilian marble, and will be 11 ft. high. Her Majesty is represented in Royal robes, holding the orb in her left hand and the sceptre in her right. Across her breast she wears the Ribbon of the Garter, and the skirt of her dress is embroidered with the rose, shamrock, and thistle. The pedestal is 14 ft. high, and will be executed in Irish limestone. The front is enriched with a large bronze cartouch, bearing the dates 1837-1897. On each side is a large bronze figure, representing the spinning and shipbuilding industries; and at the back is a figure, also in bronze, of a child reading, typical of education. The panel in front will bear the inscription of her Majesty's Diamond Jubilee message. The execution of the statue has been entrusted to Mr. Thos. Brock, R.A.—*Irish News.*

SCULPTURE MEMORIAL, NEAR DUPPLIN CASTLE, PERTH.—An angel figure is to be placed over the graves of the late Earl and Countess of Kinnoull in the old churchyard near Dupplin Castle. The winged figure, of Sicilian marble, is 5 ft. 6 in. in height. The figure is to stand on a rocky base, and the design of the memorial, which has been carried out under the supervision of Mr. Henry Seymour, architect, Edinburg, includes an enclosing low balustrade of marble round the graves. The sculptor was Mr. Rhind.

VISIT OF THE SANITARY INSPECTORS' ASSOCIATION TO BELGIUM.—Very nearly one hundred members of this Association left Charing Cross on the 4th inst. for Dover, on their way to Belgium, reserved saloon carriages being provided by the South-Eastern Railway for the party, who were met at Dover by a contingent from the provinces. The party proceeded to Antwerp by the Belgian mail packet, and they were received by the Burgomaster at the Hotel de Ville at Antwerp. Sunday was devoted to visits to the sights of Antwerp, and on Monday the sanitary institutions were inspected. The members were due at Brussels on Monday evening to attend a reception by M. Bruyn, the Minister of Agriculture. Tuesday and Wednesday were devoted to business and pleasure, there being visits to the Exhibitions and a reception by the Burgomaster, M. Buls, a banquet to the members of the Conference, and a reception by the King. On Thursday there were receptions at Ghent and Bruges by the Burgomasters, at the Hotel de Ville in each case. The members of the Association were due at Ostend on Friday, where their final reception was to be held, and on Saturday morning they are due at Charing Cross on their return to England.

ORGAN CASE, ROYAL MANCHESTER COLLEGE OF MUSIC.—It is stated that the Council of the Manchester College of Music has recently received and accepted the offer of a new organ to replace the one at present in the large hall of the College. The case will be designed by Mr. Edward Salomons, and Messrs. Wadsworth & Brother, of Manchester, will be the builders.

CITY AND SOUTH LONDON ELECTRIC RAILWAY EXTENSION.—We understand that Mr. T. Phillips Figgis, of 5, Adelaide-place, E.C., has been appointed architect for the proposed new stations at London Bridge and Moorgate-street, the sites for which are at present in the hands of the contractors, who are boring for the tunnels.

PROTECTION FROM FIRE IN LONDON.—According to the report of the Fire Brigade Committee of the London County Council for the year ending March 31 last, the staff of the Brigade numbers 963. The actual disbursements during 1896-7 on maintenance, including pensions, were 164,726*l.*, and on capital 75,031. 2s. 7d. The number of fires that occurred in the year was 3,616, of which only 122 are described as serious, there being in all seventy-seven lives lost. The number of points at which an alarm can be given is 583. Hydrants have yet to be provided in a considerable area.

CAPITAL AND LABOUR.

DUNFERMLINE JOINERS' STRIKE.—The Dunfermline joiners struck work a fortnight ago for an advance of wages to the extent of 1d. per hour, from 7d. to 8d. per hour. The masters have offered a compromise of ½d. and another ½d. in March when existing contracts are completed, and this offer the men have accepted and have returned to work.

LEGAL.

ALLEGED INFRINGEMENT OF ANCIENT LIGHTS AT NEWCASTLE-ON-TYNE.

THE case of Thwaites *v.* Wilkinson came before Mr. Justice Byrne, sitting as Vacation Judge, on the 8th inst., it being a motion by the plaintiff, of 26, Clarence-crescent, Newcastle-on-Tyne, to restrain the defendant from continuing or further proceeding with a building so as to obstruct the access of light to his ancient windows.

Mr. Cutler, Q.C., appeared in support of the application, and Mr. Millar, Q.C., opposed it.

COMPETITIONS, CONTRACTS, AND PUBLIC APPOINTMENTS.

COMPETITIONS.

Nature of Work.	By whom Advertised.	Premiums.	Designs to be delivered.
*Technical Schools, Public Library, and Public Hall	*Colne Corporation	50*l.* and 35*l.*	Oct. 20
Town Hall and Law Courts	Cardiff Corp.	500*l.*; 300*l.*; 200*l.*	Dec. 4
Board School for 550 Boys	Carlisle Sch. Bd.	20*l.* and 10*l.*	No date

CONTRACTS.

Nature of Work or Materials.	By whom Required.	Forms of Tender, &c. Supplied by	Tenders to be delivered.
Concreting (about 1,500 yards)	.....	Bulman Bros. Kirkbride, Carlisle	Sept. 12
Additions, &c. Schoolhouse, Finzean	.....	Walker & Duncan, 3, Golden-sq. Aboyne, Aberdeen	Sept. 13
Bricklayers and Plumbers' Work at Workhouse	East Preston Union	H. Howard, Surv. Town Offices, Littlehamp n	do.
Forty-seven Houses	Barry Parks Building Club	James & Morgan, Archt. Charles-street Chambers, Cardiff	do.
Additions to Schools	Governors, Beaumaris County School	J. Owen, Archt. Menai Bridge	do.
Works at Town Hall	Skipton U.D.C.	Mr. Mallinson, Town Surv. Skipton	do.
Painting Workhouse Buildings, Gravelly Hill	Aston Union	J. North, Union Offices, Vauxhall-rd. Birmingham	do.
Non-slipping Tiles, Fusehill Workhouse Hospital	Carlisle Union	The Master, 25, Lowther-street, Carlisle	do.
Construction of Railways	Caledonian Ry. Co.	G. Graham, C.E. Buchanan-street Station, Glasgow	do.
Business Prem'ses, Abbey-street, Accrington	Nuttall & Co. Ltd.	Sames & Green, Archt. 65, Northgate, Blackburn	Sept. 14
Bridge in Brickwork, Chat Moss Estate	Manchester Corp.	City Surv. Town Hall, Manchester	do.
Painting, &c. Trinity Congregational Church, Dewsbury	.....	J. Kirk & Sons, Archt. Dewsbury	do.
Rebuilding House, Rosebank, Alford	.....	Jenkins & Marr, C.E. 16, Bridge-street, Aberdeen	do.
Bank Fittings, Halifax	.....	W. Clement Williams, Archt. 29, Southgate, Halifax	Sept. 15
Children's Hospital, &c. at the Broomlands	Middlesbrough Board of Guardians	R. Lofthouse & Sons, Archt 62, Albert-rd. Middlesbro'	do.
Alteration of Governor House	Gas Committee, Leeds City Council	R. H. Townsley, Municipal Offices, Leeds	do.
Forty-five Cottages, Pontycymmer	Ffaldan Colliers Co. Ltd.	Colliery Offices	do.
Repairs to Bridges	Farnham R.D.C.	E. Crundwell, Clerk, South-street, Farnham	do.
Alterations to Bridge, Saltburn	North Eastern Ry.	W. J. Cudworth, Compy. Engr. Darlington	do.
Painting Sanatorium, Ladywell	Salford Corporation	Boro. Engr. Town Hall, Salford	Sept. 16
Reconstruction of Roof over Yard, Pendleton	do.	do.	do.
Painting, &c. Central Free Library	Sheffield Corporation	C. W. Wike, City Surv. Town Hall, Sheffield	do.
Cycle Factory	York Central Engineering Co. Ltd.	Penty & Penty, Archt. Clifford-chambers, York	do.
Two Blocks of Artisans' Dwellings, Maisondieu	Elgin Building Co. Ltd.	G. Sutherland, Archt. Elgin	Sept. 17
Alterations, &c. Premises	Taunton Co-operative Society	F. W. Roberts, Archt. 2, Hammet-street, Taunton	do.
Additions, &c. Lask Edge Chapel, Horton	.....	H. Clewes, Horton, Staffs.	do.
*Underground Convenience	Plymouth Corp.	J. Paton, Boro. Engr. Municipal Offices, Plym'th	Sept. 18
Four-and-half Miles Pipe Sewers	Hebden Bridge U.D.C.	Messrs. Newton, Engr. 17, Cooper-street, Manch'st'r	do.
Supply of Materials	Chorley Corporation	Boro. Surv. Town Hall, Chorley	do.
Sixty-five Dwelling-houses	Pontlottyn Building Club	Archt.'s Office, 6, Heol Evan Wynne, Pontlottyn	do.
Masonic Hall, Portadown	.....	J. J. Phillips & Son, Archts. 61, Royal-avenue, Belfast	do.
Pair of Cottages, Shakeham-place, Pulborough	Duke of Norfolk	Estate Building Office, London-road, Arundel	Sept. 20
Cottage, Warminghurst, Pulborough	do.	do.	do.
Pair of Cottages, Tortington	do.	do.	do.
Sewage Works, Auesworth	Basford R.D.C.	H. Walker, Engr. Newcastle-chmbrs Nottingh'm	do.
Alterations to Virginia House, Leeds	C. Roberts	T. Winn, 70, Albion-street, Leeds	do.
Warehouse, Hunslet	do.	do.	do.
Mixed Schools for 528 Children	Resolven School Bd.	J. Cook Rees, Archt. St. Thomas Chmbrs. Church-place, Neath	do.
Bacon Factory, Selby	Yorkshire Bacon Curing Co.	E. Townend, 1, Abbey-place, Selby	do.
Pipe Track, Boness Waterworks	Police Commissioners	J. & A. Leslie & Reid, C.E. 72A, George-st. Edinburgh	do.
*Wooden Platform for Entertainments	Commrs. Lambeth Public Baths	A. H. Tiltman, Archt. 6, John-st. Bedford-row, W.C	do.
*Supply of Stores	London, Tilbury, and Southend Railway	The Sec. Fenchurch-st. Station	do.
Artisans' Dwellings, Ravensthorpe	.....	S. Wood & Son, Archt. Cheapside, Heckmondwike	do.
*Hire of Horses, Carts, &c.: Barging-away Slops	Rotherhithe Vestry	The Town Hall	do.
Rebuilding, 30, Lowther-street, Whitehaven	H. T. Weld	Moffat & Bentley, Archt. Whitehaven	Sept. 21
*Tarpaving and Drainage Works	Tottenham U.D.C.	P. E. Murphy, Engr. Council Offices	do.
*Kerbing and Paving Road	do.	do.	do.
*Painting, &c. Water Tower and Tank Water Supply Works, Llandyfan	do.	do.	do.
	Llandilo U.D.C.	D. Jenkins, Engr. to the Council, Llandilo	do.

CONTRACTS—*Continued.*

Nature of Work or Materials.	By whom Required.	Forms of Tender, &c. Supplied by	Tenders to be delivered.
Cottage Homes, Shotley Bridge	Guardians of Gateshead Union	C. A. Sharp, Archt. 24 Grainger-st. W. Newcastle	Sept. 31
Pipe Sewers	Wallasey U.D.C.	W. H. Travers, Dist. Engr. Public Offices, Church-street, Egremont	do.
*New Camp Sheathing at Lett's Wharf	Commrs. of Sewers	H. M. Bates, Principal Clerk	do.
1,700 tons of Limestone	Nantyglo and Blaina U.D.C.	W. L. Roach, Blaina	Sept. 22
200 tons of Gravel	do.	do.	do.
Enlarging Clifynydd Schools	Pontypridd Sch. Bd.	A. O. Evans, Archt. Post Office Chmbrs. Pontypridd	do.
*Heating and Ventilating of Municipal Buildings	Plymouth Corporation	J. Paton, Borough Engr.	do.
*Removal of Slop	St. John (Hampstead) Vestry	Surv. at Vestry Hall	Sept. 23
School, &c. Doe, Lea	Ault Hucknall (U.D.) School Board	Bollinson & Son, Archts. 13, Corporation-street, Chesterfield	Sept. 24
Engine and Boilers for the Workhouse	Pontefract Union	Greaves & Co. Archts. Corn Market, Pontefract	do.
Alterations, &c. to Board Schools, &c Ivybridge	.....	Mr. Lake, Highland-street, Ivybridge	do.
Additions to Cluny Hill Hydro, Forres	.....	J. Forrest, Archt. 129, High-street, Forres	Sept. 27
Grates for Cluny Hill Hydro	.....	do.	do.
Materials for Marine Lake	Hoylake and West Kirby U.D.C.	T. Foster, Surv. to the Council, Public Offices, Hoylake	do.
Materials for Parades	do.	do.	do.
*New Board Room and Offices	Ormskirk Union	Willink & Thicknesse, Archts. 14, Castle-street, Liverpool	Sept. 28
*Broken Granite	Edmonton U.D.C.	G. E. Eachus, Engr. at Town Hall	do.
*Asylum Foundations, &c.	West Ham Council	Lewis Angell, Boro' Engr. Town Hall	do.
*Alterations, Underground Convenience, Ludgate Circus	Commrs. of Sewers	H. M. Bates, Principal Clerk	do.
Making-up Roads	Erdington U.D.C.	H. H. Humphries, Surv. to Council, Public Hall, Erdington	Sept. 29
*Building a Shelter	Met. Asylums Board	T. W. Aldwinckle, Archt. 1, Victoria-street, S.W.	do.
Dwelling-house, Pellon	.....	C. F. L Horsfall & Son Archts. Lord-st. Chmbrs. Halifax	do.
Widening Railway	North Eastern Rly.	H. Copperthwaite, Engr's. Offices, N. E. Rly. York.	do.
*Erection of School	Bootle School Board	Cox & Marmon, Archts. 11, Dale-street Liverpool	Sept. 30
Sinking and Boring Well, York-street	Yorkshire Pure Ice Co.	W. S. Braithwaite, Archt. 6, South-parade, Leeds	No date
Alterations at Mabgate Mills, Leeds	Mabgate Mills Co.	J. J. Mosley, 6, Wormald-row, Leeds	do.
*Enlargement, &c. of Workhouse, Bletchingley	Godstone Union	F. Elliff, Archt, Caterham	do.
Four Cottages, St. Luke's-avenue	Ramsgate Corporation	W. A. McIntosh Valon, Engr. to the Corporation	do.
Two Houses, Clowne	.....	W. H. Wagstaff, Archt. 57, Saltergate, Chesterfield	do.
Warehouses, &c. Scotch-street	.....	T. Taylor Scott, Archt. Carlisle	do.
Town Hall, Rothes	.....	R. B. Pratt, Archt. County Bank House, Elgin	do.
Drainage Works, District Infirmary, Ashton-under-Lyne	.....	N.E. Sanitary Inspection Association, 9, Albert-st. Manchester	do.
Convent, Portadown	.....	A. Ferguson, 36, Royal-avenue, Belfast	do.
*New Church, Ramsey, Huntingdon	.....	W. Waddington & Son, Archt. 17, St. Ann's-sq. Manchester	do.
Six Houses, Belgrave-street, Skipton	.....	J. Hartley, Archt. Exchange-bldgs, Skipton	do.
Farmhouse, &c. Water Fulford	.....	Digby Cayley, 7, Blake-street, York	do.
Steel Joists, &c. for a Convent	.....	J. Costello, Contractor, Sea-road, Galway, Ireland	do.
Detached Villa, Bromboro'	.....	Bell Williams, Son, & Co. Surv. 40, North John-street, Liverpool	do.
Hotel, Swanage	.....	Pearce & Offer, Dorset-shire Bank-chambers, Bournemouth	do.
Residence, Bromsgrove, Lickey	.....	F. J. Yates, Archt. 1, Newhall-st. Birmingham	do.
Alteration to Liscensed Premises, Belfast	M. O'Hanlon	W. J. Moore, Archt. Whitehall-bldgs, Ann-st. Belfast	do.
Alterations to Licensed Premises, Belfast	J. M'Cann	do.	do.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Applications to be in.
*Clerk of Works	Enfield U.D.C.	3*l.* per week	Sept. 15
*Assistant Clerk of Works	Woking U.D.C.	.....	do.
*Assistant Building Inspector	Salford Corporation	120*l.* per annum	Sept. 16
*Engineering Assistant	Aberdeen Burgh Surv.	150*l.* per annum	do.
*Surveyor	Aldershot U.D.C.	200*l.* per annum	Sept. 21
*A Teacher of Woodcarving	Leeds School of Art	.....	Sept. 22
*Instructor in Mason's Work	Battersea Polytechnic	.....	No date

Those marked with an asterisk (*) are advertised in this Number. *Competitions, p.* iv. *Contracts, pp.* iv. vi. *&* viii. *Public Appointments, pp.* xvi. xvii. *&* xix.

Mr. Cutler, in the course of his opening statement, said that on June 27 the plaintiff was informed by letter from the Town Surveyor of Newcastle of the fact that there had been deposited plans for the alteration of the adjoining house (of which the defendant was the owner), and inviting the plaintiff to come and inspect them. The plaintiff went, but, being a postman and not a builder, he failed to grasp what the alterations meant then; but the next day he wrote a letter to the Surveyor, saying that he should object to the plans in order to shut the door to his waiving any possible objection.

The plaintiff's affidavit in support of the motion was to the effect that he purchased the freehold of his house on April 25, 1884, subject to certain building regulations, and that there was a wall about 8 ft. 2 in. in height dividing his and the defendant's house and upon which the defendant was erecting his new building.

His Lordship asked how much higher the defendant's building had to go?

Mr. Cutler said that when the plaintiff first saw the plans, the whole height was to be 22 ft. The defendant had not gone to that height, but what he had done was to go on building till the writ was issued, and then he stopped and filed an affidavit saying that there had been a change in the plan.

His Lordship: How much higher is he going?

Mr. Cutler: There must be in any circumstances a roof and chimneys, which, we say, cannot be less than another 5 ft. The learned counsel said that since the writ had been issued and served, the defendant's architect, in an affidavit filed on August 18, said that the plans had been changed, and that they were going to build 7 ft. less at the end of the wall most remote from the plaintiff's house, and 2 ft. less where it joined the plaintiff's house.

His Lordship: How much higher do you propose to take it, Mr. Millar?

Mr. Millar replied that the walls, as he understood, were complete, and all that was desired to be done was to add the roof and chimneys.

His Lordship: Will you undertake, if you are allowed to put the roof and chimneys on, to pull down if the Court orders at the trial?

Mr. Millar said that he would do so.

After some further discussion, his Lordship said, that on the defendant's undertaking not to raise the height of the wall, except to the extent of putting on the roof and necessary chimneys and undertaking to pull down if so directed by the Court at the trial, there would be no order on the motion, except that costs be costs in the action. He directed that the action should be set down in the witness list at once, the parties to be at liberty (if they so agreed) to deliver pleadings in the vacation.

MEETINGS.

TUESDAY, SEPTEMBER 14.

Sanitary Institute.—Congress and Exhibition, Leeds.

WEDNESDAY, SEPTEMBER 15.

Sanitary Institute.—Congress and Exhibition, Leeds (continued).

Builder's Foremen and Clerks of Works' Institution.—Ordinary Meeting of the Members. 8 p.m.

THURSDAY, SEPTEMBER 16.

Sanitary Institute.—Congress and Exhibition (concluded. Exhibition will remain open until October 9).

SATURDAY, SEPTEMBER 18.

Architectural Association.—Summer visit to the new church at Roehampton. Mr. G. H. Fellowes Prynne, architect. Meet at East Putney Station (District Railway) at 3.30 p.m.

RECENT PATENTS:

ABSTRACTS OF SPECIFICATIONS.

19,506.—COVERING FOR BRICKS DRIED IN THE OPEN AIR: *E. Pratt.*—In order that the covers above a row of undried bricks may be removed or replaced simultaneously instead of one by one, inventor uses end supports to which covers are jointed, and the covers are capable of connexion with each other, in such sort that moving the end one actuates the covers of a whole row.

22,189.—BATHS: *D. G. Davy.*—Inventor claims in combination with a bath a tube closed at top and having a clear opening at bottom to bath, and having hot and cold water inlets opening thereinto, and an overflow opening and a valved discharge. Also in the tube a valve spindle, carrying a discharge plug with grid.

23,215.—WINDOW SASHES: *G. Johnstone.*—Inventor claims devices illustrated for connecting sashes with counterbalance weights and cables, &c., consisting of vertically movable blocks and corresponding plates. Also various modifications of the principle.

27,663.—DUST AND DRAUGHT EXCLUDERS, &c.: *G. H. Young.*—In order to attach indiarubber to any required article, inventor forms a groove along latter with a mouth less than the width of bottom of groove. The indiarubber, &c., is inserted in this dove-tailed channel. Invention is applicable to draught-excluders, squeegees, lids of water-closets, boxes, &c.

29,839.—STEP LADDERS: *G. H. Cliff.*—Invention consists in a step ladder constructed with an extension piece or continuation of one of the back struts and a hand-rail pivoted thereto, and to an arm or support pivoted to the front portion of the step ladder.

16,079.—BRICKMAKING MACHINES: *R. Ll. Gurden and Another.*—Inventors claim in a brickmaking machine the combination with a sliding table and connecting-rod of one or more blocks reciprocating in one or more grooves in table, providing for lost motion and the stationary condition of the table at each end of stroke, also of a hollow slide bar forming an oil reservoir, and various alternative arrangements of brick-lifting devices.

NEW APPLICATIONS FOR LETTERS PATENT.

AUGUST 23.—19,407, P. Van der Gucht and A. Kreps, Firegrates.—19,437, A. Flürscheim, Mantles for Incandescent Gaslights.

AUGUST 24.—19,458, M. Adams, Valves and Fittings for Lavatory and other purposes.—19,490, G. Dollner, Drying Kilns.—19,493, C. Hartung, Method of Making Plate Glass.—19,513, W. and J. Rawlings, Automatic Flushing Cisterns.—19,542, J. Mason and W. Hardy, Roofing Tiles, &c.—19,566, E. Habermaas, Sash Locks.

AUGUST 25.—19,584, W. Boydell, Gully and Stench Trap for Waste Water.—19,639, N. Sherson and Others, Sheet Roofing and in the form of sheets therefor.

AUGUST 26.—19,655, G. Ridout, Staircase Grooving Plane.—19,657, E. Leak, Cases or Appliances for use in containing or supporting Tiles, &c., whilst being fired.—19,683, A. Browne, Water Taps.—19,689, F. James, Hinge.—19,705, F. Hanna, Closet Seat.—19,715, W. McLaren, Opening, Closing, and Fastening Windows and Ventilators.—19,723, J. Milligan, Traps for Gullies, Closet Sinks, &c.

AUGUST 27.—19,736, J. and C. Bedford, Manufacture of Varnish.—19,753, C. Brooke, Fasteners for Window Sashes.—19,795, A. Koburger, Protection against the Opening of Doors by Strangers.

AUGUST 28.—19,824, P. Eckhardt, Fasteners for Windows, Doors, &c.

PROVISIONAL SPECIFICATIONS ACCEPTED.

9,149, W. Tickelpenny and A. Perkins, Ventilators.—14,229, A. Fowler, Sewer and Drain Ventilator.—15,768, J. Burn, Securing Cupboard Doors.—16,056, G. Meserve, Plastering Walls.—16,058, J. Hardie, Window Sash Fastener.—16,863, H. Wallis, Window Sash Fastener.—17,616, G. Smith, Sash Fastener, also applicable for Opening Windows.—18,668, J. Thomson, Plumb Rules.—18,705, R. McIndoe, Nail.—18,724, J. Guillon, Joints or Unions for Metallic, Earthenware, or similar Pipes.—18,779, T. Holden and C. Major, Cement.—19,015, W. Ison, Sash Fasteners.—19,025, H. Priester, Closing Doors.

COMPLETE SPECIFICATIONS ACCEPTED.

Open to opposition for two months.

18,622, G. Thomson, Manufacture and Treatment of Artificial and other Stone Roofing and other Tiles, and Enamel and Apparatus therefor.—19,090, F. Collins, Pulleys for Sash Windows, &c.—23,850, J. Elliott, Air Inlet to Drains.—7,999, C. Riker, Controlling the Discharge and Overflow from Wash-basins, Tubs, &c.—12,289, W. Hoffmann, Door Lock.—13,319, H. Jansen, Ceilings and Walls.—17,680, T. Leigh, Casement Stays for Window or Fanlight Fasteners, &c.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

August 18.—By DUNDAS & WILSON (at Kirkwall).

Orkney, Orphir.—The Estates of "Snoogrow" and "Groundwater," 1,380 a. £5,440

August 25.—By A. C. HIGGS (at Weymouth).

Radipole, Dorset.—"West Mead House" and 10 a. 1 r. 39 p., f. 4,000

"Manor Farm" and 12 a. 0 r. 32 p., f. £2,860

Spa-rd., &c., enclosure of building land, 17 a. 2 r. 39 p., f. 2,190

Dorchester-rd., four plots of freehold land 142

Icen-rd., a corner plot of building land, f. 111

By FERGUSON & SON (at Leek).

Leek, Staffs.—"Hillswood End Farm," 31 a. 3 r. 2 p., f. 1,100

Ipstones, Staffs.—"Above Church Farm," 34 a. 3 r. 12 p., f. 1,700

August 26.—By Messrs. BALLS (at Sudbury).

Wickham St. Paul's, Essex.—"White House Farm" and 50 a. 2 r. 19 p., f. 735

Chilton, Suffolk.—"Chilton Grove Farm," 192 a. 0 r. 32 p., f. 3,000

Acton, Suffolk.—"Gad's-lane Farm," 98 a. 2 r. 1 p., f. 1,650

Sudbury, Suffolk.—Suffolk-rd., a range of outbuildings, f. 250

Six plots of land, f. 393

By LAWRENCE & SONS (at Great Marlow).

Great Marlow, Bucks.—Institute-rd., three plots of land, f. 450

New-rd., &c.—Four plots of land, f. 495

By BROWN & FOULKES (at Princes Risboro').

Bledlow, &c., Bucks.—"Holly Green Farm," 217 a. 0 r. 36 p., f. and c. 2,750

"Walton Farm," 68 a. 2 r. 30 p., f. and c. 1,400

Six freehold cottages and enclosures, 15 a. 0 r. 20 p. 1,175

"Uplands Farm," 39 a. 2 r. 8 p., f. 395

Chinnor, Oxon.—A freehold cottage, r. 8*l.* 200

By MORRIS, MARSHALL, & POOLE (at Llanfair).

Llanfair-Caereinion, Montgomery.—"The Hendre Estate," 436 a. 3 r. 26 p., f. 7,025

By R. WATERMAN & SONS (at Maidstone).

Broughton Malherbe, &c., Kent.—"Yew Tree Farm" and 5 a. 0 r. 30 p., f. 310

"Woodcock Farm," 27 a. 1 r. 6 p., f. 475

Enclosures of land, 23 a. 3 r. 6 p., f. 305

Maidstone.—72 and 74, Peel-st., f. 665

41, Brewer-st., f. 185

By F. THIRKILL (at Selby).

Barkston Ash, Yorks.—Freehold house, smithy, farm buildings, and 20 a. 2 r. 19 p., f. 1,135

A copyhold cottage and 3 r. 24 p. 328

By STIMSON & SONS.

Old Ford.—38 to 46 (even), Medway-st., u.t. 54 yrs., g.r. 20*l.* 1,350

2 and 4, Ashwell-rd., u.t. 60 yrs., g.r. 6*l.* 6s. 365

Bow.—205 and 207, Grove-rd., u.t. 39 yrs., g.r. 10*l.* 10s. 560

12, Cordova-rd., u.t. 51 yrs., g.r. 3*l.* 10s. 205

Canning Town.—5 and 7, Wouldham-st., u.t. 55 yrs., g.r. 5*l.* 10s. 240

Peckham.—20, 33, 35, 37, and 39, Oakhurst-grove, u.t. 80 yrs., g.r. 50*l.*, r. 177*l.* 1,350

13, Rye Hill Pk., u.t. 68 yrs., g.r. 9*l.*, e.r. 45*l.* .. 315

10, 12, and 14, Reedham-st., area 13,000 ft., f. 1,210

August 27.—By H. F. RUSSELL (at Leominster).

Kimbolton, Hereford.—"Grantsfield Farm," and 17 a. 1 r. 36 p., f. 550

Leominster (near), Hereford.—A freehold cottage and 1 a. 1 r. 1 p. 150

By WORSFOLD & HAYWARD (at Newbury).

Newbury, Berks.—73 and 74, Northbrook-st., f., r. 77*l.* 2,160

31 to 34, West-st., f., r. 49*l.* 810

By W. R. NICHOLAS & CO.

Old Kent-rd.—1, 3, 5, and 7, Mawbey-rd., u.t. 36 yrs., gr. 10*l.* 1s. 870

August 28.—By WINTERTON & SONS (at Tamworth).

Harlaston, Staffs.—"Fish Pits Farm" and 87 a. 1 r. 14 p., f. 2,200

August 30.—By ORGILL, MARKS, & ORGILL (at Masons' Hall Tavern).

Putney.—Salisbury Pavement, "The Horseshoe Restaurant," f., r. 130*l.* 3,250

Halstead, Essex.—Market Hill, "The George Hotel," f. 4,860

By R. IMESON & SON (at Grewelthorpe).

Kirby Malzeard, Yorks.—"Kirby Moor Farm" and about 33 a., f. 700

August 31.—By E. E. CROUCHER & CO.

Hornsey.—37, Alexandra-road, u.t. 80 yrs., g.r. 7*l.* 10s., r. 34*l.* 315

14, The Avenue, u.t. 80 yrs., g.r. 8*l.* 10s., r. 40*l.* 390

Dalston.—100 to 108 (even), Broke-rd., u.t. 49 yrs., g.r. 17*l.* 10s., r. 137*l.* 1,390

By H. V. CHEW.

Poplar.—Elsa-st., f.g.r. of 8*l.* 10s., reversion in 92 yrs. 200

Highbury.—43, Liberia-rd., u.t. 87 yrs., g.r. 7*l.*, r. 38*l.* 390

By WILLIAM ROLFE (at Masons' Hall Tavern).

Holloway.—St. James's-rd., "The Prince of Wales" p.h., u.t. 44 yrs., r. 130*l.*, with goodwill 17,560

By HUND & WATTS (at London Commercial Sale Rooms).

Grenada, West Indies.—"The Tufton Hall Cocoa Plantation," 430 a., f. 8,100

By ROBERTS, SON, & TORV (at Yeovil).

Limington, Somerset.—The Lamb and Lark Inn," f. 850

By Messrs. SPELMAN (at King's Lynn).

Narborough, Norfolk.—"The Narborough Mills," with residence, shop, and cottage, f. 1,770

By WINCH & SONS (at Ashford).

Appledore, &c., Kent.—Enclosures of Marsh Land, 32 a. 1 r. 20 p., f. 600

September 2.—By MANSELL & ROWE.

Camberwell.—77, Albany-rd., u.t. 84 yrs., g.r. 42*l.* 3 and 5, Sandover-rd., u.t. 84 yrs., g.r. 14*l.* 10s. 790 405

Clapton.—32 and 34, Colenso-rd., u.t. 85 yrs., g.r. 12*l.* 420

3, Saratoga-rd., u.t. 85 yrs., g.r. 7*l.* 225

Chiswick.—16 to 22 (even), Annandale-rd., u.t. 81 yrs., g.r. 25*l.* 4s. 785

Twickenham.—1 to 4, Crown-rd., u.t. 83 yrs., g.r. 33*l.*, r. 168*l.* 1,280

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; e.r. for estimated rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; yd. for yard, &c.

PRICES CURRENT OF MATERIALS.

TIMBER.		
Greenheart, B.G. ton	8/0/0	9/0/0
Teak, E.I....load	10/10/0	15/10/0
Sequoia, U.S.ft.cu.	1/8	1/10
Ash, Canada load	3/5/0	4/10/0
Birch, do.	4/5/0	6/0/0
Elm, do.	4/0/0	5/5/0
Fir, Dantzic, &c..	2/5/0	4/5/0
Oak, do.	2/10/0	3/10/0
Canada	5/10/0	6/10/0
Pine, Canada red	0/0/0	0/0/0
Do. Yellow	2/0/0	4/0/0
Lath, Dantzic, fath	4/10/0	5/10/0
St. Petersburg..	5/0/0	6/10/0
Wainscot, Riga, &c., log	1/10/0	3/15/0
Odessa, crown....	1/10/0	2/15/0
Deals, Finland 2nd & 1st std 100	8/0/0	8/10/0
Do. 4th & 3rd...	8/0/0	8/10/0
Do. Riga	6/10/0	7/10/0
St. Petersburg, 1st yellow....	10/0/0	12/10/0
Do. 2nd yellow	9/0/0	10/10/0
Do. white	8/10/0	10/10/0
Swedish	9/0/0	15/10/0
White Sea	9/10/0	16/0/0
Canada, Pine 1st	20/10/0	26/10/0
Do. do. 2nd	15/0/0	17/10/0
Do. do. 3rd, &c.	7/10/0	11/0/0
Do. Spruce, 1st.	10/10/0	12/0/0
Do. do. 3rd and 2nd	8/0/0	9/0/0
New Brunswick	7/10/0	8/0/0
Battens, all kinds	5/0/0	20/0/0
Flooring boards, sq., 1 in. prep. 1st	0/8/6	0/15.6
Do. 2nd	0/7/0	0/12/0
Other qualities—	0/5/0	0/6/6
Cedar, Cuba, ft.	1/4	1/4
Honduras, &c.	1/4	1/4
Mahogany, Cuba	1/5	1/6½
St. Domingo, cargo av.	1/2	1/3
Mexican, do. do.	1/2	1/3
Tobasco, do. do.	1/4	1/7
Honduras, do.	1/5	1/6½
Box, Turkey, ton	4/0/0	15/0/0
Rose, Rio	7/0/0	12/0/0
Bahia	8/0/0	12/0/0
Satin, St. Doming.	0/0/6	0/1/0

TIMBER (*continued*).		
Satin, Porto Rico	0/0/6	0/1/
Walnut, Italian ..	0/0/3	0/0/
METALS.		
Iron—Pig, in Scotland .....ton	2/4/9	2/4/11½
Bar, Welsh, in London	5/15/0	5/17/6
Do. do. at works in Wales	5/10/0	5/12/6
Do. Staffordshire, in London	6/5/0	7/10/0
COPPER—British cake and ingot	52/5/0	52/15/0
Best selected ..	52/15/0	53/5/0
Sheets, strong..	58/0/0	59/0/0
Chili bars	49/3/0	0/0/0
YELLOW MTL lb.	4½d.	5d.
LEAD—Pig Spanish ...ton	14/0/0	14/5/0
English com. brands	14/5/0	14/7/6
Sheet, English 6 lbs. per sq. ft. and upwards ..	15/10/0	0/0/0
Pipe.....	16/0/0	0/0/0
ZINC—English sheet.....ton..	20/5/0	0/0/0
Vieille Montagne	21/5/0	0/0/0
Spelter	17/7/6	0/0/0
TIN—Straits	61/8/9	0/0/0
Australian.....	62/5/0	62/10/0
English Ingots.	64/10/0	65/10/0
Banca.....	62/0/0	0/0/0
Billiton	59/15/0	60/0/0
OILS.		
Linseed .....ton	16/0/0	0/0/0
Cocoanut, Cochin	27/15/0	0/0/0
Do. Ceylon	24/0/0	0/0/0
Palm, Lagos.....	24/10/0	0/0/0
Rapeseed, English pale	27/10/0	27/15/0
Do. Brown	27/0/0	27/10/0
Cottonseed ref. ..	25/17/6	26/10/0
Oleine.....	28/10/0	29/10/0
Lubricating U.S.	0/6/3	0/7/6
Do. black	0/4/9	0/6/6
TAR—Stockholm barrel	22/0	0/0/0
Archangel.....	0/12 6	0/0/0
Turpentine	21/15/0	0/0/0

TENDERS.

[Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursdays*. N.B.—We cannot publish Tenders unless authenticated by the name and address of the sender: and we cannot publish announcements of Tenders accepted unless the amount of the Tender is given, nor any list in which the lowest Tender is under £100, unless in some exceptional cases and for special reasons.]

ABERDEEN.—Accepted for laying granite causeway at Belvidere-place and Beechgrove-terrace, for the Town Council. Mr. W. Dyack, Burgh Surveyor, Town House, Aberdeen:—
John McAdam & Sons, Charlotte-street, Aberdeen £902 3 3

ABERDEEN.—Accepted for laying granite causeway at Fraser-street, for the Town Council. Mr. W. Dyack, Burgh Surveyor, Town House, Aberdeen:—
James Leith, jun., 294, Clifton-road, Aberdeen ..£324 11 4

ABERDEEN.—Accepted for macadamising at Belgrave-terrace, and for pipe-sewers in Burns-road and Forest-avenue, for the Town Council. Mr. W. Dyack, Burgh Surveyor, Town House, Aberdeen:—
Macadamising.
James Leith, jun., 294, Clifton-road, Aberdeen ..£62 15 8
Pipe Sewers.
Alex. McKay, 6, Laurelwood-avenue, Aberdeen:—
Burns-road £18 3 0
Forest-avenue..... 63 14 3

BRITON FERRY.—For the erection of seven dwelling-houses, for the Industrial Co-operative Society, Limited. Mr. H. A. Clarke, architect, Briton Ferry:—

Thomas Waters £1,449	4 6	J. W. James. £1,223	0 0
Howel Jones 1,398	0 0	W. J. Jackson..... 1,180	0 0
George Crocker 1,359	0 0	Gower Bros., Briton Ferry* 1,162	0 0
J. & J. Jones 1,315	0 0		

* Accepted.

BULK (Lancs.).—Accepted for alterations and repairs, Moorsid Farm, for Mr. W. H. Dalton. Mr. J. Parkinson, architect, 67, Church-street, Lancaster:—
Masonry.—R. Hall, Forton £111 16
Joinery.—W. Richardson, Lancaster 115 0
Slating.—R. Hall & Son, Lancaster 90 0
Plumbing.—W. Abbott & Co., Lancaster..... 24 0

CONGHAM.—For the restoration of St. Andrew's Church, Congham, Norfolk (first contract). Mr. H. J. Green, architect, 31, Castle Meadow, Norwich:—

Cornish & Gaymer ..£682	4 2	Jno. Boddy, Harpley,	
W. J Larner 507	4 6	Swaffham* £523	0 0

* Accepted conditionally.

CORSHAM.—For erecting drinking fountain in memory of the late Mr. C. J. Mayo, for the Mayo Memorial Committee. Mr. Harold Brakspear, architect, Corsham:—
Rudman.....£117 | Osborne (accepted) £105

CRICKLEWOOD.—For alterations to shop and premises at No. 23, The Parade, High-road, Cricklewood. Mr. John Spink, architect, 64, Holborn Viaduct, E.C.:—

Sage & Co. £516		E. Wheeler £314	
Neal 328		Sumner & Co. (accepted) .. 295	

[Architect's estimate, £276.]

DEVENPORT.—For constructing a sewer in Paradise-road, for the Corporation. Mr. J. F. Burns, Borough Surveyor, Municipal Office, Devenport. Quantities by Mr. A. Campbell Hodge:—

J. Shaddock £523	2 6	H. Kerswill £416	0 0
A. W. Coles..... 512	12 8	T. Shaddock*..... 397	10 3
C. L. Duke 449	3 1		

* Accepted.
[All of Plymouth.]

EXMOUTH.—Accepted for the erection of the Victoria Clock-tower on the Esplanade (exclusive of clock). Messrs. Kerley & Ellis, architects, Exmouth:—
T. Abell, Exmouth £328 12

EXMOUTH.—For the rebuilding of the Railway Hotel, for Messrs. Norman & Pring. Messrs. Kerley & Ellis, architects, Exmouth:—

Gibson £1,400	0	Hayman £1,237	3
Skinner 1,333	0	Perry..... 1,159	0
Abell..... 1,325	0	Dart 1,050	0

HORWICH (Lancs.).—For the foundations of St. Catherine's Church. Mr. F. Morton Palmer, architect, 3, Lee-lane, Horwich:—

J. J. Ware £1,133	0	Preston & Hurst £1,026	0
J. & T. Binns, Victoria-road, Horwich*..... 1,028	0	W. Dougill & Sons 996	10
		W. J. Slater 994	0

* Accepted.

LONDON.—For erecting steam printing works at Nos. 187, 188, 189, The Arches, Victoria-road, Peckham, S.E., for Mr. Francis Oldfield. Mr. Edmond Strevens, surveyor, &c.:—

Stephens	£1,016 0	Dove	£860 0
Eames	976 0	Tyreman	792 0
F. Webster	906 0	Colman	789 11
Champion	888 0		

LONDON.—For the erection of new residence, Watson-street, Deptford, for the Nursing Sisters of St. John the Divine. Messrs. Ardron & Dawson, architects, 8, Delahay-street, S.W. Quantities by the architects:—

T. Sayers	£1,010	Hall Bros	£1,597
Simmonds Bros.	1,869	W. Eyre	1,593
G. L. Holloway	1,669	T. D. Levy	1,587

LONDON.—Accepted for alterations and additions to stabling at 176 and 178, Neate-street, Camberwell, S.E., for Mr. E. G. Quinn. Mr. Arthur Garman, architect, 66, Oakhurst-grove, East Dulwich, S.E.:—

Lawrence & Co. £175

LONDON.—For the erection of stabling at 38, Charles-street, Hatton Garden, for Thomas Wallis & Co., Ltd. Messrs. Yetts, Sturdy, & Usher, architects, 44, Finsbury-pavement, E.C. Quantities by Messrs. R. L. Curtis & Sons, 119, London Wall, E.C.:—

Hall, Beddall, & Co.	£9,291	Falkner & Sons	£8,554
Wagstaff & Sons	9 065	William Downes	8 059
Colls & Sons	8 828	Woodward & Co.*	7.935
Lawrence & Sons	8,635	* Accepted.	

LONDON.—For the erection of warehouse and offices, 14, Charles-street, E.C., for the Durable Printers' Roller Company. Messrs. Yetts, Sturdy, & Usher, architects, 44 Finsbury-pavement, E.C. Quantities by Mr. Alfred Howard, The Outer Temple:—

Lidstone & Sons	£11,389	Dove Bros.	£10 600
Hall, Beddall, & Co.	10,880	William Downes	10,333
Wagstaff & Sons	10,777	Woodward & Co.	10,200

LONDON.—For alterations at "The Queen's Head" public-house, Barking, E. Mr. Herbert Riches, architect, 3, Crooked-lane, King William-street, London, E.C.:—

W. J. Maddison	£1,350	W. Harper	£910
A. Webb	915	S. Salt (accepted)	878

LONDON.—For repairs and decorations at "The Empress of India" public-house, South Hackney, N.E. Mr. Herbert Riches, architect, 3, Crooked-lane, King William-street, London, E.C.:—

Williams & Co.	£632 11 6	S. Salt	£559 0 0
W. Harper	580 0 0	T. Osborn & Sons*	457 0 0

* Accepted with slight modification.

LONDON.—For extension to boiler-house, boiler-setting, &c., for the Electrical Power Storage Company, Limited, Millwall, E. Mr. Alfred Roberts, architect, 18, Nelson-street, Greenwich, S.E.:—

F. Thorne	£646	W. Mills	£568
Jones & Groves	615	Windsor & Co.	523

LONDON.—Accepted for alterations, additions, fittings, &c., at the "City Arms" public-house, Devons-road, Bromley, E., for Messrs. Holt & Co. Mr. Fred A. Ashton, architect, 177, Romford-road, Stratford, E.:—

J. & H. Cocks £2,300

MARAZION.—For the erection of a villa at Marazion, for Mr. R. Phillips. Mr. O. Caldwell, architect, Penzance:—

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G. Mincio	£785 0 0	Mines & Michell	£624 10 0
W. G. Harris	676 9	Williams & Mines.	
A. Chapman	514 0 0	Marazion (accepted)	6:5 0 0

Plumbing.

H. Thomas	£62 17 0	P. Nicholls, Penzance*	£50 0 0
T. Stewart	55 0 0	* Accepted.	

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NEWPORT (Isle of Wight).—For addition to premises, High-street, Newport. Mr. S. E. Tomkins, architect, Castlehold-chambers, Newport, I.W. Quantities by the architect:—

B. S. Gould	£950	G. F. Quinton	£607
G. Y. Groundsell	744	J. Meader	694
George Hayles	710		

PINNER.—For proposed additions to Ruislip Holt, Pinner for Mr. C. W. Millar. Mr. Fredk. W. Foster, architect, 41, Bedford-row:—

Webster & Cannon	£1,478	Longley & Sons	£1,416
Alfred Bush	1,445		

PLUMPTON.—Accepted for alterations to Novirgton Manor, for Mr. H. P. Edwards. Mr. Fredk. W. Foster, architect, 41, Bedford-row, W.C.:—

Longley & Sons, Crawley £2,197

PONDERS END.—Accepted for the erection of eighteen dwelling-houses in South-street, Ponders End, N., for Mr. W. Langman. Mr. Fred. A. Ashton, architect, 177, Romford-road, Stratford, E.:—

C. Simmons £4,140

C. B. N. SNEWIN

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RADCLIFFE.—For the construction of a brick sewer, &c., Church-street, Rectory-lane, for the Urban District Council. Quantities by Surveyor to District Council:—

Taylor & Fleming	£2,116 19 0	Etheridge & Clark	£1,596 9 1
R. E. Jones	1,950 1 6	S. Sedden, Bolton *	1,535 4 6

* Accepted.

RADCLIFFE.—For the construction of a stoneware pipe sewer, &c., in Stopes-road, for the Urban District Council. Quantities by Surveyor to District Council:—

Etheridge & Clark, Manchester	£399 14 0
R. E. Jones, Patricroft	375 11 6
Silas Sedden, Bolton*	365 3 6
Taylor & Fleming, Tyldesley	354 6 6

* Accepted.

SALTERTON.—Accepted for additions at the Exeter Bank, Salterton, for Messrs. Sanders & Co. Messrs. Kerley & Ellis, architects, Exmouth:—

Hayman, Exmouth £386 18

SHEERNESS.—For building a mission hall, for Holy Trinity Church Sheerness. Mr. T. W. Parrish, architect:—

Pavey & Sons	£1,049	J. R. Bligh, Eastchurch*	£820
E. F. Hughes	874	* Accepted.	

SOUTH WOODFORD.—Accepted for the erection of a detached house, George-lane, South Woodford, N.E. Mr Herbert Riches, architect, 3, Crooked-lane, King William-street, London, E.C.:—

W. Mundy £736

WORSBOROUGH DALE.—Accepted for erecting two houses, Green-street, for Mr. Benjamin Turner, Barnsley. Messrs. Wade & Turner, architects, 10, Patt-street, Barnsley:—

Masonry and Brickwork.—Geo. Porter & Sons, Worsbrodale	£234 6 11
Carpentry and Joinery.—Wm. Hammerton's Exors., Worsbrodale	68 10 0
Plumbing and Glazing.—J. & F. Hammerton, Worsbrodale	8 16 0
Plastering.—Chris. Dyden, Barnsley	20 12 0
Slating.—Miss Fleming, Barnsley	21 15 0
Painting.—Stephenson & Son, Barnsley	7 5 0

TO CORRESPONDENTS.

J. H. M. (Your letter, which is rather exaggerated in its expressions, is not necessary. We have already implied that we do not think the selection the right one).—A. B., A. W. (Below our limit).

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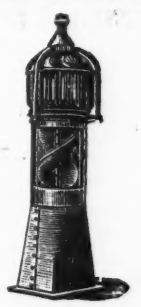

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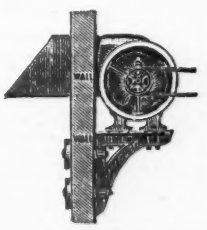

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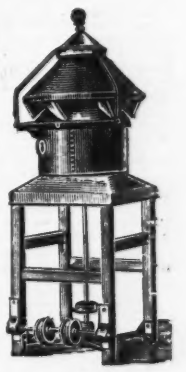

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NOTICE.—Mr. W. CHURCH HOWGATE regrets that owing to the necessity for increased office accommodation, he is unable to accept any more resident students, and only those who have been arranged for previous to July will be received.

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SPECIAL CLASSES for the above will be taught by Mr. H. BUSBRIDGE, A.R.C.S. Mem.San.Inst. at the Westbourne Park Institute, Bayswater, and at Goldsmiths' Institute, New Cross, commencing first week in October. Also Separate, Advanced, and Elementary Classes at low fees.—For particulars, apply to 42, Heavitree-road, Plumstead, S.E.

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For particulars send stamped addressed envelope to the SECRETARY, as soon as possible.

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A TEACHER of WOOD CARVING is REQUIRED for the Leeds School of Art, two nights per week. A good opening for a high-class wood carver in Leeds.

State age, terms, and qualifications, to Mr. J. O. DAYSON, Secretary, The Institute, Cookridge-street, Leeds, not later than SEPTEMBER 22nd.

ALDERSHOT URBAN DISTRICT COUNCIL.

SURVEYOR TO THE TOWN AND DISTRICT OF ALDERSHOT.

WANTED, by the above-named Council, a SURVEYOR, at a salary of 200*l.* per annum.

The person appointed will be required to give his whole time to the Council and will not be allowed to do any private work.

He will have charge of the Sewage Works, and have to perform all other duties prescribed by the orders of the Local Government Board for Surveyor, and will have to give approved security for 400*l.*

There is an Assistant Surveyor who will aid the Surveyor in performing his duties.

Letters of application and testimonials, stating age and qualifications, must be forwarded to me on or before the 21st day of SEPTEMBER, 1897.

By order of the Council,
W. E. FOSTER,
Clerk.

Aldershot,
August 31st, 1897.

WANTED immediately, in the Office of the Burgh Surveyor of Aberdeen, an ENGINEERING ASSISTANT.

Applicants, who must be under 35 years of age, must have a thorough knowledge of the routine work of a municipal engineer's office, be able to prepare reports, working drawings, specifications, and schedules of quantities, and have a knowledge of the various Acts affecting municipal work.

The salary will be 150*l.* per annum, and, other things being equal, preference will be given to a Graduate of the Association of Municipal and County Engineers and Surveyors.

Applications, accompanied by copies of not more than three testimonials of recent date, to be lodged with me, endorsed "Engineering Assistant," not later than THURSDAY, 16th SEPTEMBER next.

WM. DYACK,
Burgh Surveyor.

Burgh Surveyor's Office,
Aberdeen, 31st August, 1897.

COUNTY BOROUGH of SALFORD.

WANTED in the Borough Engineer's Office, an ASSISTANT BUILDING INSPECTOR, commencing salary 120*l.* per annum.

Applications, accompanied by not more than three testimonials, and endorsed "Assistant Building Inspector," must be delivered to me, not later than HALF-PAST FIVE p.m. on THURSDAY, the 16th instant.

By order,
SAML. BROWN,
Town Clerk.

Town Hall, Salford,
September 3rd, 1897

THE RECEPTION-ROOM AND BANQUETING-HALL.

FIREPLACE IN

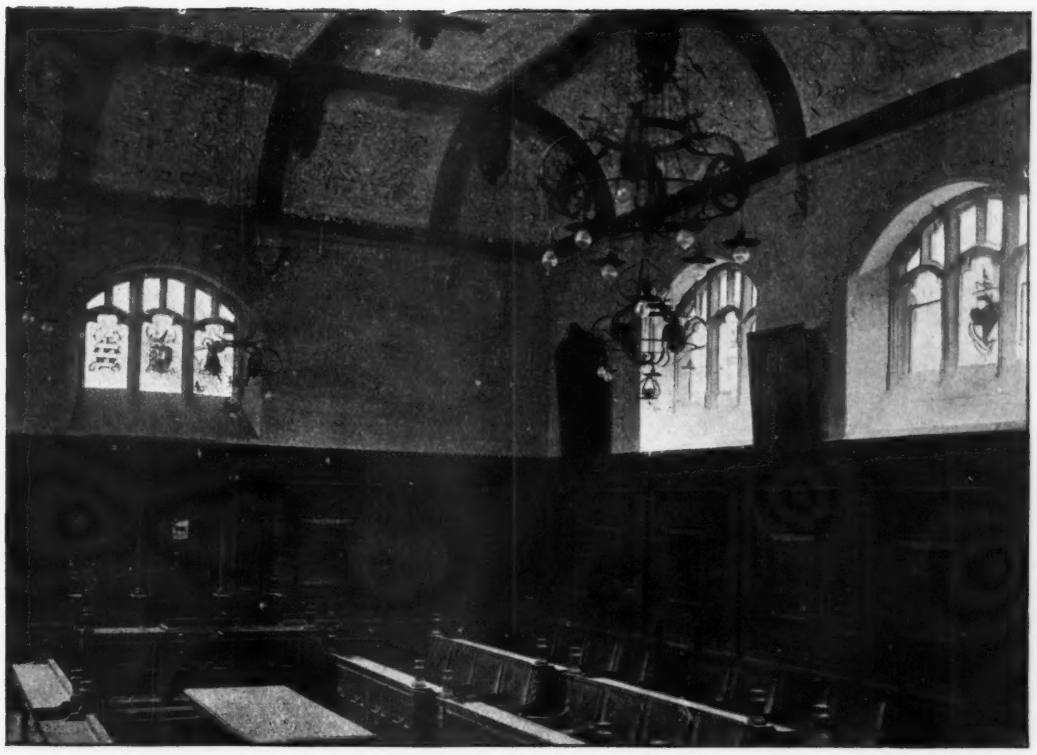
THE TOWN HALL.

THE

INTERIOR VIEWS IN THE OXFORD MUNICIPA

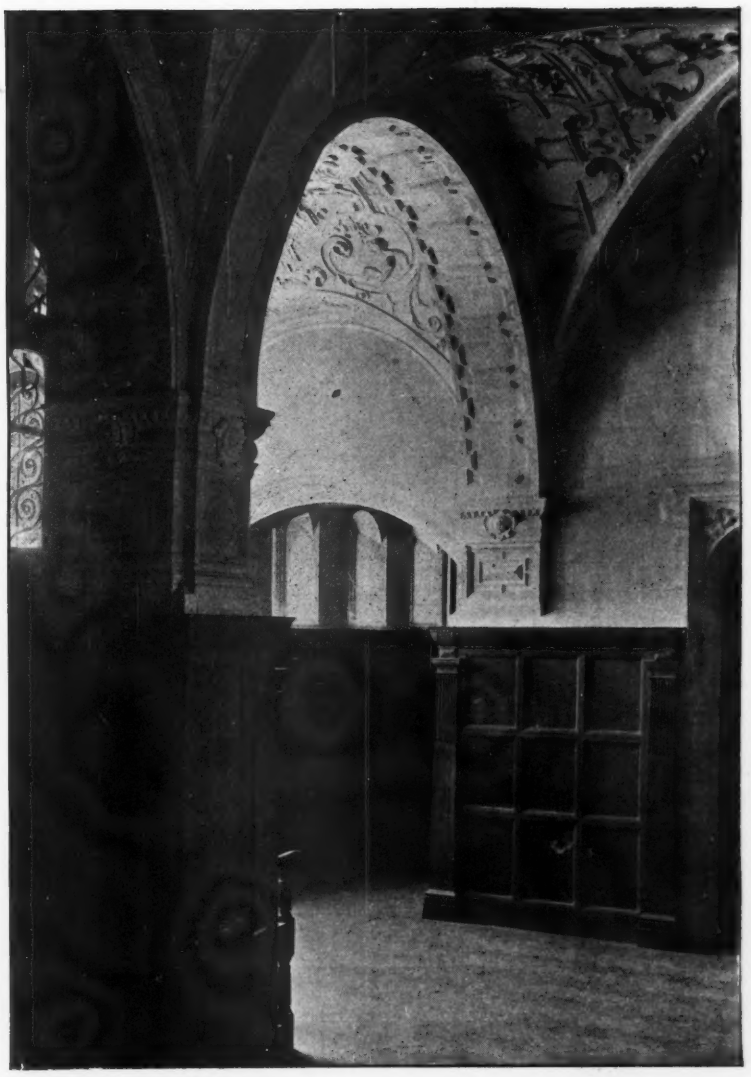
[illegible]EPLACE IN [illegible]IPTION-ROOM.

THE MA[illegible]RCASE.



THE COUNCIL CHAMBER.

GENERAL LIBRARY,
UNIV. OF MICH.
30 SEP 1897



IN THE COUNCIL CORRIDOR.

MUNICIPA[illegible]LDINGS.—Mr. H. T. Hare, A.R.I.B.A., Architect.

INK-PHOTO. SPRAGUE & Co 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.

SCULPTURE: MONUMENT TO MDME. CARVALHO (MARBLE).—By M. Mercié.

Caverton Public Hall
Silcock & Reay Architects

PHOTO-LITHO. SPRAGUE & Cº 4&5 EAST HARDING STREET, FETTER LANE, E.C.

THE BUILDER, SEPTEMBER 11, 1897.

Claverton Public Hall

Silcock & Reay Architects

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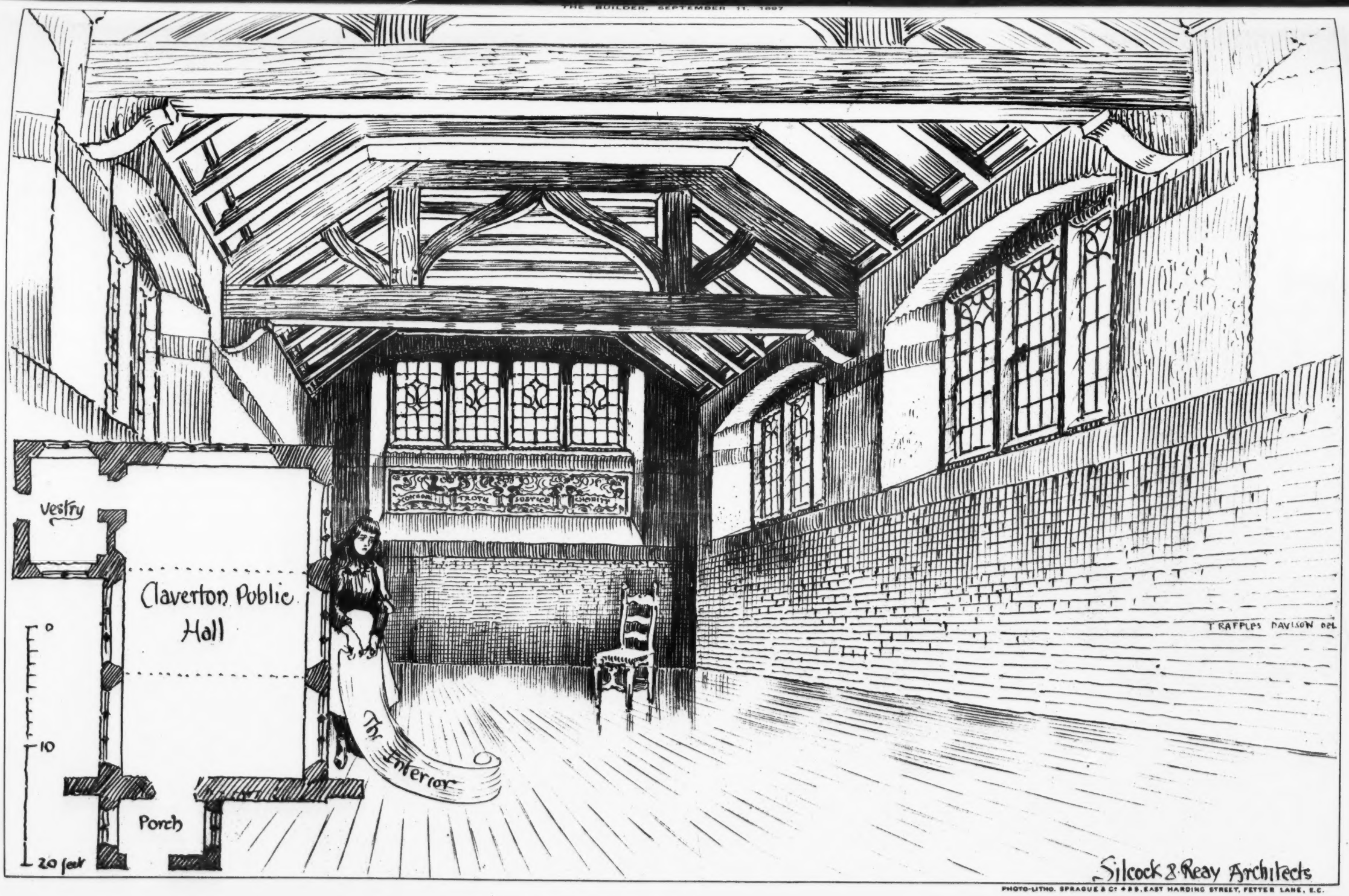

Silcock & Reay Architects

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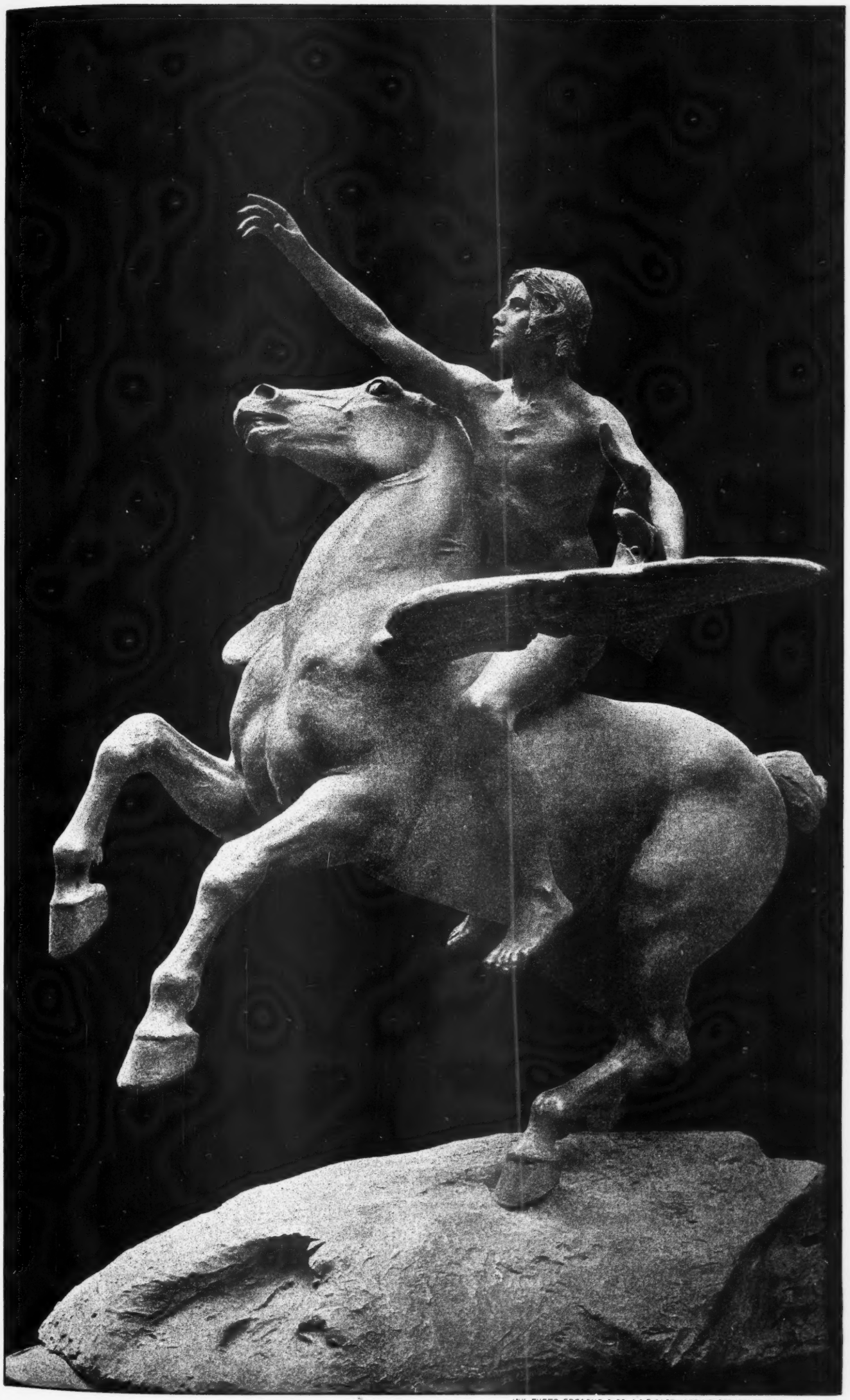

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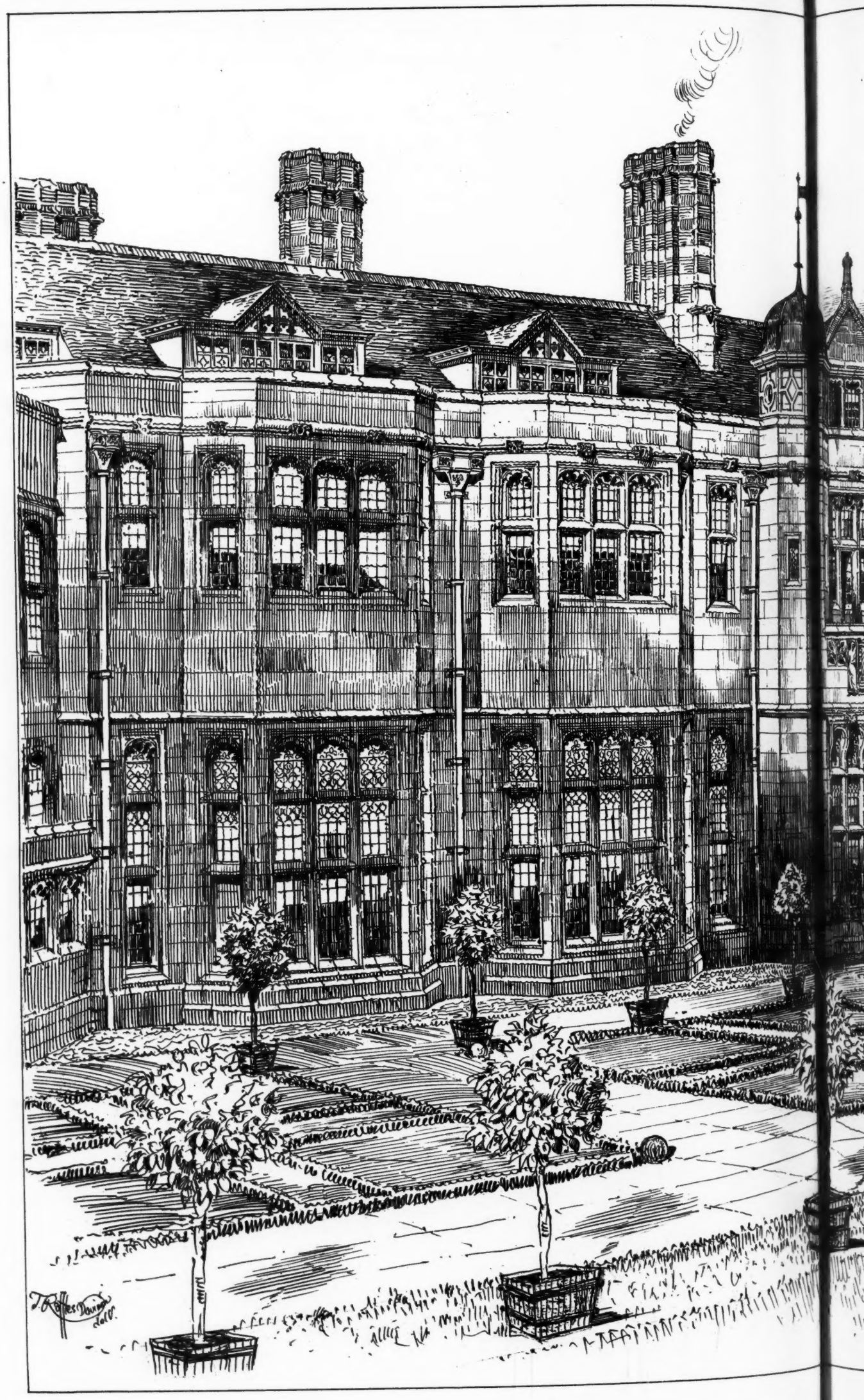
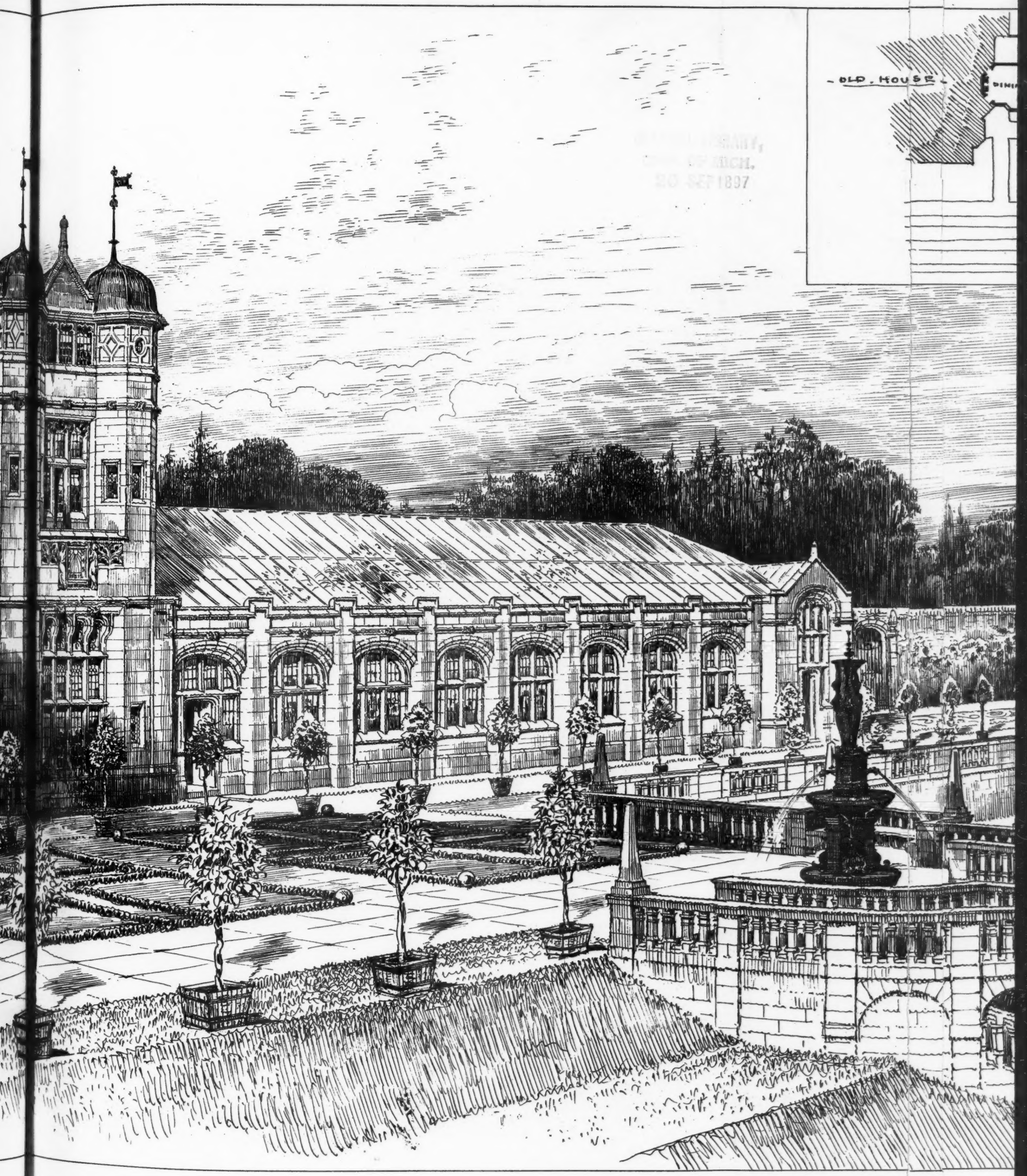
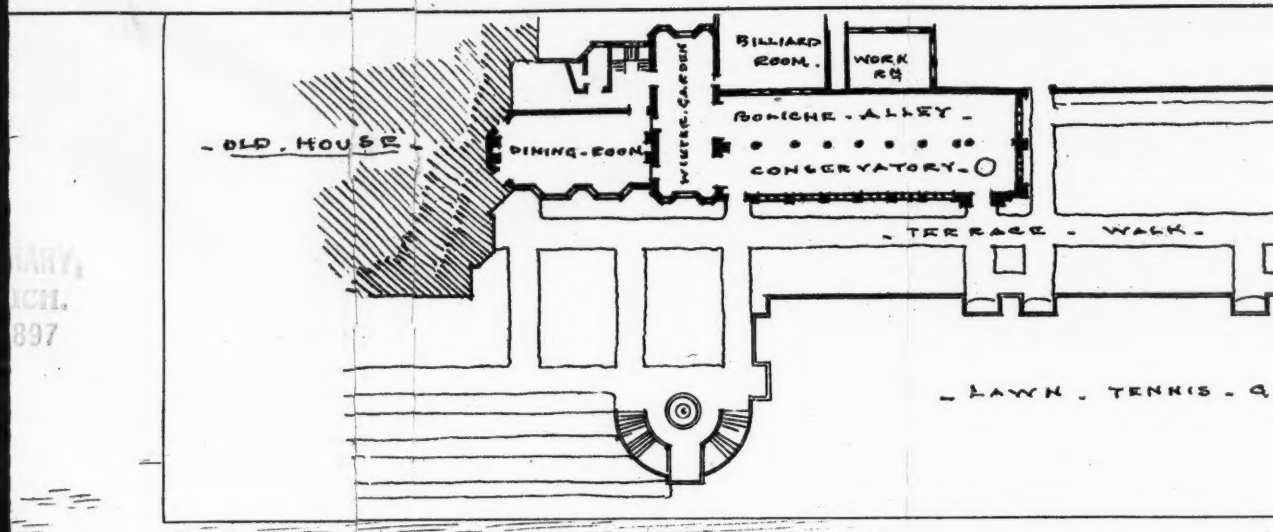
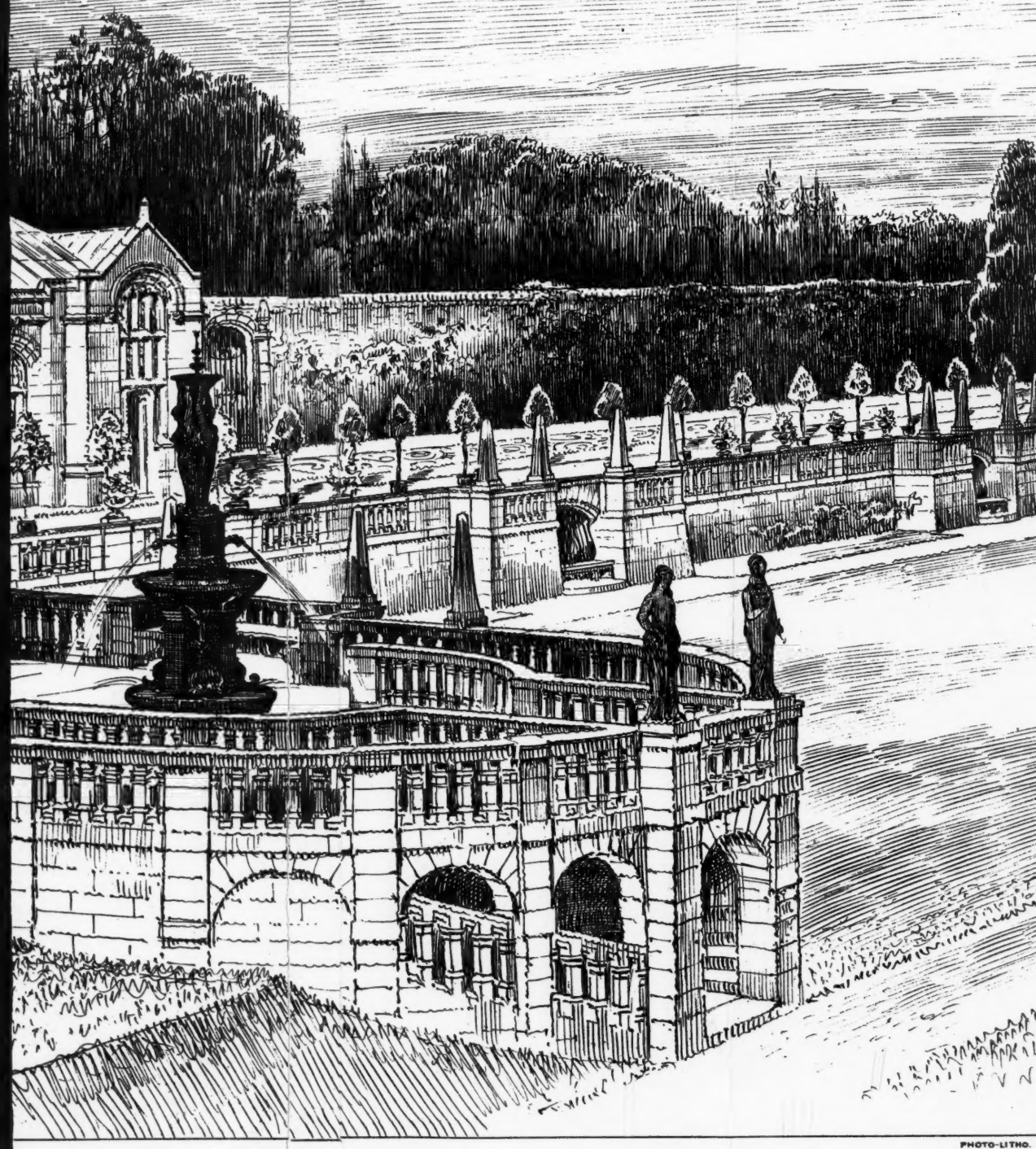




ADDITIONS TO "PADDOCKHURST," SUSSEX.—Mr. Aston Webb, F.R.I.B.A., Architect.





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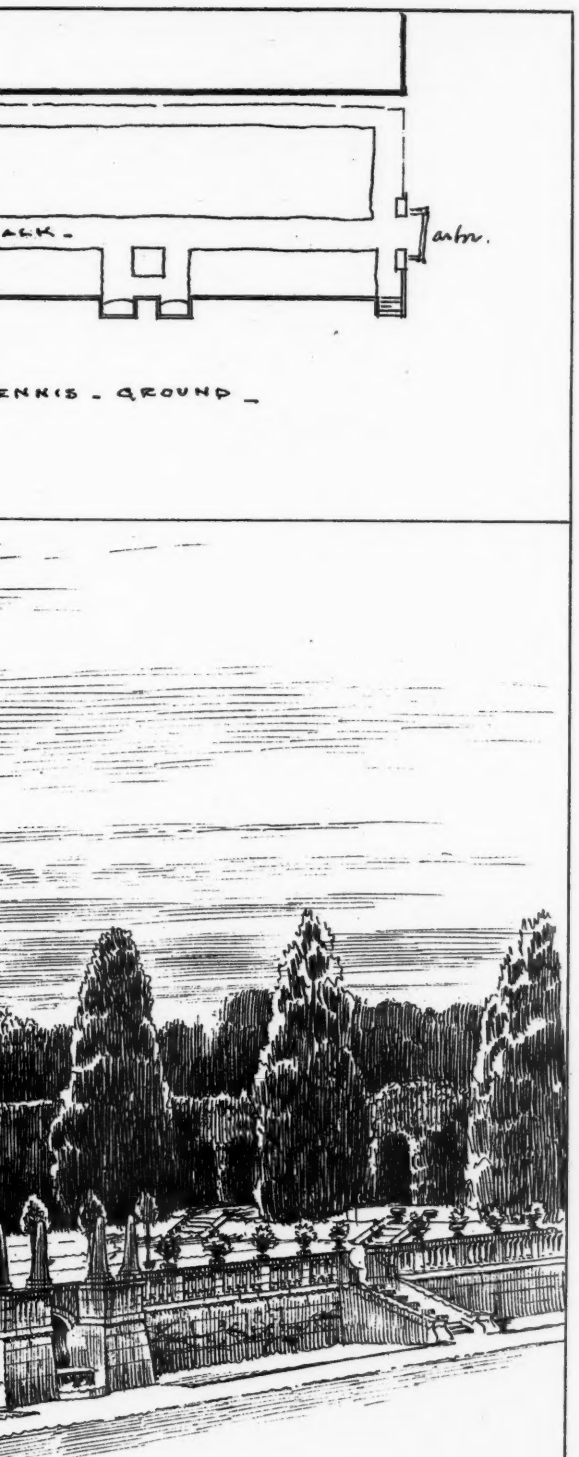

Aston Webb Architect
- march 1897 -

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